

# Supporting employees with common mental health problems at work: a realist approach

SUZANNE VAN HEES





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## Table of content

Chapter 1 .....	7
General introduction.....	7
Chapter 2 .....	19
Understanding work participation among employees with common mental disorders: what works for whom, under what circumstances and how? A systematic realist review protocol .....	19
Chapter 3 .....	41
Towards a better understanding of work participation among employees with common mental health problems: a systematic realist review .....	41
Chapter 4 .....	73
Promoting factors to stay at work among employees with common mental health problems: a multiple-stakeholder concept mapping study.....	73
Chapter 5 .....	97
Strengthening supervisor support for employees with common mental health problems: developing a workplace intervention using intervention mapping .....	97
Chapter 6 .....	124
A workplace intervention to strengthen supervisor support for employees with common mental health problems: a mixed methods realist evaluation.....	125
Chapter 7 .....	163
General discussion .....	163
Chapter 8 .....	183
Summary.....	183
Appendices .....	189
Samenvatting (Dutch summary) .....	190
Curriculum vitae .....	195
Dankwoord (Acknowledgements).....	197
List of publications .....	201





# Chapter 1

## General introduction

## **General introduction**

### **1. Work participation for employees with common mental health problems**

One out of five individuals experiences mental health problems during working life (1). Employees with common mental health problems (CMHP), such as stress, anxiety or depression, are more likely to struggle while being at work (2). This leads to negative work outcomes, such as diminished productivity (3), absenteeism (4) or presenteeism, working while being ill (5). Over the past decades, mental health problems at work, absenteeism and disability benefits have strongly increased in most Western countries, causing a burden for individuals who suffer, as well as for the society and economy (6). In the Netherlands, CMHP count for 26,8 percent of the total days being lost due to illness, because of the relatively long period of sick leave (on average 56,8 days) (7). This makes CMHP currently the most prevalent and expensive condition for disability benefits by Dutch employers and the social security system (8). In addition, the recent COVID-19 pandemic increased mental health problems at the workplace, due to reduced collegial support, structure, and increased anxiety, loneliness and stress (9-11). Furthermore, high numbers of mental health related sick leave contribute to a significant loss of potential labour supply (1). This creates a real challenge for the current labour market shortages in Europe and in the Netherlands, especially in sectors such as health care and education. Those recent developments call for action on how to prevent negative work outcomes and keep employees active in the labour market.

The majority of employees struggling with CMHP are still (partly) working (12, 13). We refer to this phenomenon as work participation, framed as staying and being productive at work. Stay at work as a concept is a relatively new in the field of occupational health. It is not uniformly defined in the literature (14) and requires a theoretical framework to be operationalized. Staying at work could also be considered a "positive" concept, compared to the often-reported and researched negative work outcomes. Work performance refers to how the employee functions at work and how to maintain work performance when suffering from CMHP.

While work can make ill, there is strong evidence that working for employees with CMHP actually contributes to health, recovery and overall well-being (15, 16). This is in line with the call of the Organisation for Economic Co-operation and Development (OECD) for preventing instead of reacting to negative work outcomes resulting from poor mental health, because intervening while people claim a disability benefit is far too late in many cases (1, 6). However, primary focus of research on mental health problems in occupational health so far has generally been on the sick-listed employee, intervening in reaction to negative work outcomes and return to work processes. The present dissertation focuses on promotion of at-work participation of employees with CMHP before they call in sick. This change of focus asks for an exploration of factors while being at work, both from research as well as from workplace stakeholders who dealt with CMHP at work. Also, this more preventive approach may disclose other causes of limited work participation problems than causes on the employee's side, for example in organisations or the given support by occupational health professionals (17). Consequently, it may also imply different roles and competencies from both employers and occupational health professionals. A novel workplace intervention is developed and evaluated in the conducted studies, aiming to improve preventive approaches.

## **2. The experience of working with mental health problems**

Employees with CMHP have more frequent and longer work absenteeism, as well as facing lower productivity at work, compared to employees with other health problems (6). Those employees who (partly) continue working despite mental health problems need increased attention for several reasons (1, 2). One reason is the often-invisible onset of CMHP, both for the employee and their social network at home or at work. Complaints or symptoms usually develop gradually and slowly, making it harder to signal and intervene on time. Second, given the stigma attached to mental health problems, the work environment plays an important role on the decision to disclose (or not), and the consequences of asking and receiving help if needed (12). Finally, employees often experience discrimination as most employers hold negative attitudes towards mental health problems (18, 19). Therefore, this dissertation focuses on the population of employees with CMHP. This could be employees diagnosed by a clinician with common mental disorders, such as depression, anxiety disorder or stress-related disorder (3). However, a substantial large number of employees who suffer from CMHP are undiagnosed and do not (yet) receive treatment (20). This group of employees at risk of increasing negative work outcomes, as a consequence of psychological complaints, is also subject within the research population of the presented studies.

### **2.1. The role of the employer and particularly supervisors**

In the Netherlands, according to the Dutch Gatekeeper Improvement Act (21), the employer and the employee are both responsible for the return to work process during the first two years of sickness absence. Besides, employers in the Netherlands also have a great legal responsibility in creating healthy working conditions. The literature on work participation among employees with CMHP shows that the outcomes of work participation are affected by individual factors (e.g. a past history of CMHP, co-morbidity), and work-related factors (e.g. lower job control combined with high workload or low levels of supervisor support) (4, 22). Regarding the work-related factors, the employer has an important role in the prevention of occupational health issues, i.e. by supporting employees with CMHP promoting work participation. Early signalling and action, by offering tailored interventions and facilitating job accommodations (23) seems essential. Current practice shows that employers often act either too late, insufficient, or sometimes even inadequate. A recent Dutch study shows that employers are less likely to have arrangements to protect employees from psychosocial risk factors than from physical risk factors (8). Reasons may be lack of recognition by employers on their role to create a healthy and supportive work context that promotes work participation (24). Another reason may be the low mental health literacy of employers, influencing attitudes and (lack of) quality actions to support employees with CMHP (25).

From the literature on return to work processes, employers reported that they find mental health problems complex. They miss out on established conditions to support employees at work and they lack strategies to provide adequate support (1, 26). Employers seem to be particularly lacking the competence to deal with employees with CMHP, due to negative perceptions and insufficient knowledge and skills on how to signal and discuss mental health problems that affect the employee's work outcomes (6, 27, 28). Interestingly, to keep employees with CMHP at work, it is necessary and

proven efficient to make adjustments to the work situation (29) and those adjustments (work accommodations) require the supervisor to act or approve (30). However, supervisors may not be aware of the opportunities or work accommodations enabling employees to continue working. As indicated by the literature on return to work, it seems valuable to invest in the competence of employers. Therefore, we aim to identify factors to stay at work and to explore how supervisors can support work participation among employees with CMHP, in order to develop a preventive workplace intervention.

## ***2.2. Interventions to promote work participation***

To promote work participation, effective preventive workplace interventions and employers' guidelines targeting working employees with CMHP are scarce (31, 32). As mentioned earlier, research focused primarily on the individual by preventing mental health problems (33), with limited attention paid to the work context (27). Although the number of empirical studies targeting the workplace has increased, there is a moderate evidence on the promotion of work participation for employees with CMHP (32). In addition, in practice it is still challenging to promote work participation in the work context (34) and in research it is difficult to evaluate preventive interventions that promote work participation (35). In order to intervene adequately, it is necessary to obtain a better understanding of the related causal mechanisms and the complex interaction of those mechanisms with the work context leading to work participation (1, 36). In this dissertation, we therefore aim to unravel thoroughly how to promote work participation for employees with CMHP, to develop a workplace intervention that meet the needs of various stakeholders.

Learning from research on return to work, supervisor training and mental health literacy training to all staff was a best practice recommendation in employer guidelines promoting return to work for employees on mental disorder-related sick leave (37). Besides the limited availability of interventions on prevention and work participation, researchers often report implementation issues in workplace interventions (38). For example, that interventions are not tailored to the organizational context and lack of participation of involved stakeholders (39). Subsequently, interventions are not successfully implemented and sustained and therefore have no impact. Although interventions to improve the competence of employers may have a positive impact, there is still limited evidence on effective employer-focused interventions and its impact on work participation of employees (40, 41). However, there is a growing interest in best practice guidelines for employers, that could be improved and shared more actively (35, 37). Therefore, this dissertation aims to explore the impact of a workplace intervention targeting supervisor support in prevention, and to investigate how and under which circumstances such an intervention works.

## ***2.3. The involvement of labour experts in workplace interventions***

Work functioning for employees at risk of negative work outcomes emerges more and more as an issue for occupational health professionals in general (17). As stated above, employers have an important role in preventive occupational health. However, they find work participation and mental health highly complex and need to increase their skills and knowledge to deal with employees with CMHP. For this, the occupational health professionals can provide employers with necessary support

and advice *before* employees fall sick (26). The occupational health professionals who are trained as “labour experts” in the Netherlands are experts in matching the employee’s work capacities with their work and work context. Regarding work accommodations and this matching process, the labour expert is one of the key professionals supporting supervisors in signalling, conversing and matching work capacities. Traditionally, these labour experts are educated on (the prevention of) long term work disability and therefore operate usually in individual return-to-work processes. Shifting towards prevention implies that labour experts may encounter more and more the (representative of the) employer, addressing psychosocial risk factors and signals when employees are at risk, rather than assessing the sick-reported employees. This requires them to have 1) a good insight in the multifactorial aetiology of mental health and work participation, 2) insights in high risk groups such as currently working employees with CMHP, who often face complaints that are diffuse and help seeking behaviour is limited and 3) expertise in communication between professional and the employer (42). To make this shift to prevention, it may demand different competencies from labour experts supporting employers to create (mentally) healthy workplaces (17).

### 3. Theoretical framework

In this dissertation, the concept of stay at work and work performance (work outcomes) will be investigated to better understand how to promote work participation for employees with CMHP. On the employee level, we searched a suitable model that considers mental health as a state of mental well-being that enables employees to work well (32), rather than the absence of a mental health condition. Therefore, the Capability-for-work model is used to interpretate processes leading to work outcomes for employees facing mental health problems (47). This model is based on the concept of capability by Amartya Sen, who defines capabilities as functioning that the person is able to achieve, depending on his or her particular circumstances (48). Work outcomes, such as staying at work, may be understood by how a person converts resources into capabilities based on someone’s values and choices. It is hypothesized that employees with CMHP can realize to stay at work by “being able” as well as “being enabled” (47). Overall in this model, work participation is viewed as a shared responsibility of the individual and the (social) work context. Several other theoretical models have been developed to gain a better understanding of factors influencing work participation, such as the International Classification of Functioning (49) and the Job-Demands resource model (50). Those models are based on biomedical and psychological theories. This implies a focus on the individual with the problem, targeting their capacity to work, e.g. by reducing severity of symptoms or increasing coping skills. Differently, the Capability-for-work model looks for what is valued by the employee, and how these values can be realized by a supporting work context, rather than the employee’s experience of facing reduced capacities or high demands for the job (47). This model may help to frame and enhance our understanding of how workplace stakeholders can support employees with CMHP staying and performing at work.

Several studies have found that supervisory support and behaviour are important predictors of return to work of individuals with any type of disorder (43, 44). We hypothesise that it is necessary to target effective supervisory behaviour to promote work participation, incorporating both motivational factors and organisational factors that influence supervisor behaviour (23, 45). The Integrated model of

behaviour prediction for employers has been identified to explain and change supportive behaviour by supervisors (46). Although the employer is technically a group of individuals, in our study supervisors represent the employer. It is relatively new to frame the employer's capacity is a result of behaviour of individuals in the organisation. This model helps us to target supervisor behaviour, assuming that the supervisors' individual behaviour is based on their skills, intention, influenced by attitudes, social pressure, self-efficacy, general motivational factors and organisational factors (work context). We particularly choose this model because includes factors on the motivational- and organisational aspects that may influence behaviour.

#### **4. Methods used in this dissertation**

Organizations and interventions in everyday practice are complex living systems and that cannot be "controlled" by research trials, making it hard to identify the effectiveness of a workplace intervention. This challenge calls for more rigorous evaluations, to better inform policy and practice (51). Realist research may provide a methodological answer to this call (52). As proposed by the Capability-for-Work model, contextual factors enable (or disable) individuals to stay and perform well at work, that trigger mechanisms that promote work participation. Accordingly, the need for theory building on the evidence base of work participation and the diversity of contextual factors in organizations and interventions underpin our rationale for conducting studies using realist research.

Realist research is a theory-driven evaluation method that is designed for complex social interventions or phenomena, providing an analysis that is more explanatory in nature (53). It basically answers the question: what works (outcome), for whom, under which circumstances (context), how and why (mechanisms). Diverse sources of evidence are used to model a realist understanding and the complex causal relationships using context-mechanism-outcome (CMO) configurations (54). In this CMO heuristic, the context is the backdrop or organizational context of programs. Mechanisms are defined as the resources generated from program strategies or activities and how people respond to resources offered through those strategies. How those realist terms are defined and used is presented in chapter 2, 3 and 6 of this dissertation. In general, the following basic concepts are used to conduct realist research: generative causation (54), ontological depth (55) and retroductive theorizing (56). Generative causation means that the manifested world is generated (i.e., caused) via underpinning mechanisms. Ontological depth is the idea that reality is stratified in layers, a notion that is depicted in the iceberg metaphor of realist causation. Empirical (observable) reality (top of iceberg above water level) is the result of underpinning mechanisms (iceberg beneath water level) (55). Retroductive theorizing is the activity of uncovering hidden mechanisms of action in those deeper layers. Using those concepts, we aim to make theoretical and methodological progress, thereby raising further understanding about mental health and the promotion of work participation.

Besides the realist approach, this dissertation shows research methods that are common in applied sciences. One is concept mapping (57) to conceptualize the outcome Stay at work from various stakeholder's perspectives. Furthermore, focus groups, interviews, and the systematic process of Intervention mapping will be used (58), to guide the participatory development of a novel workplace intervention. By doing so, this dissertation strives to apply a participatory approach, that has been increasingly recommended and implemented in occupational health research and practice (59).

Participation of stakeholders may lead to more effective interventions, a higher acceptance and implementation of solutions, and also to a better adherence, which increases the chance that solutions are sustained over time (60, 61).

## **5. The outline and aim of this dissertation**

The aim of this dissertation is to deepen our understanding on how to effectually promote work participation for employees with CMHP and how supervisors can support those employees to stay at work, translating those insights into a novel workplace intervention. The first step is to present a framework to better understand work participation with CMHP, including its working mechanisms and contextual factors. Chapter 2 presents the protocol of a systematic realist review on work participation with CMHP. Chapter 3 presents the results of the systematic realist review, which included studies on the work outcomes stay at work and work performance that result in a novel theoretical framework. In the second step, we explore the concept of Stay at work from various workplace stakeholders. Chapter 4 presents this concept mapping study with employees with CMHP, supervisors and occupational health professionals. The third step is to present the development of a workplace intervention strengthening supervisor support and to evaluate its impact among supervisors in the Netherlands. Chapter 5 provides a detailed description of the development process of a novel workplace intervention using Intervention mapping. Chapter 6 presents the results of a mixed-methods realist evaluation on whether, how, and under which circumstances this intervention works. Lastly, chapter 7 describes the overall discussion of this dissertation. The main findings of the studies are discussed. Contributions to theory development and reflections on the intervention and the used methodology are provided, resulting in recommendations for future research and practical implications.

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## Chapter 2

Understanding work participation among employees with common mental disorders: what works for whom, under what circumstances and how? A systematic realist review protocol

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**Abstract**

**Background:** Work participation among employees with common mental disorders (CMDs) is an increasingly important, yet highly complex phenomenon. Given the call for preventing instead of reacting to negative work outcomes, there is a need to understand how employees with CMDs can continue working.

**Objective:** 1) to provide insights in applying a realist approach to the literature review process and 2) to present a way to develop an explanatory framework on work participation, the related causal mechanisms and the interaction with the work context.

**Methods:** A systematic realist literature review, using stay at work (SAW) and work performance (WP) as outcomes of work participation. This protocol paper explains the rationale, tools and procedures developed and used for identification, selection, appraisal and synthesis of included studies.

**Results:** The review process entailed six steps to develop so called 'middle range program theories'. Each step followed a systematic, iterative procedure using context-mechanism-outcome (CMO) configurations.

**Conclusions:** Conducting a realist review adds on the understanding to promote work participation, by examining the heterogeneity and complexity of intervention- and observational studies. This paper facilitates other researchers within the field of occupational health by demonstrating ways to develop a framework on work participation using realist synthesis.

## 1. Introduction

Work participation among employees with common mental disorders (CMDs) is an increasingly important topic because it has positive consequences for the employee's social status and health (1, 2) and for organizations and society as a whole (3). Being at work contributes to wellbeing and mental health (4, 5). Alternatively, being depressed, anxious or stressed affects the working life of the employee in terms of negative work outcomes, such as sickness absence and impaired work performance (6, 7). It is estimated that at any point in time, one-sixth of the working age population is suffering from CMDs (3, 8, 9). CMDs cause the highest number of sickness absence and reduced work capacity in the Western world (10, 11). Considering the magnitude of CMDs, the Organisation for Economic Co-operation and Development (OECD) calls for preventing instead of reacting to negative work outcomes from poor mental health. However, there is rather limited evidence on how to promote work participation despite CMDs, the related causal mechanisms and the complex interaction with the work context (3, 8, 12). To promote work participation, it is important to understand what occurs among those employees with CMDs who continue working.

Work participation is defined as the way an employee fulfils the work role in the workplace (1, 7). This study gives attention to employees who actually continue working instead of being sick listed, either “successfully” or “struggling”, and how it affects their work performance. In this study, work participation is operationalized by those two work outcomes, that are linked to our understanding of work participation among employees with CMDs (7, 13). The first outcome is stay at work (SAW), that is, *‘the employee is currently working’*. SAW is a relatively new concept in the field of occupational health and is not uniformly defined in the literature (14). A diversity of terms has been used so far, such as staying at work (14, 15), refraining from sick leave despite the experience of mental illness (16) or absence of absenteeism (14, 17). We define SAW as continued working, indicated as no absenteeism or not being absent for more than 50% or no longer than 6 weeks (7, 17, 18). Besides SAW, we are interested in the way CMDs affect employees’ work performance (WP), or *‘how the employee functions at work’*. This second outcome is indicated by the level of diversion in WP or indicated by presenteeism (19). CMDs refer to depression and anxiety disorder as the most frequent disorders (9), but other mental disorders such as adjustment disorders and burnout are also included (2, 20). A large number of employees who suffer from CMDs are undiagnosed and do not receive treatment (21), or do not disclose their symptoms of mental illness at work (22). Those employees may struggle while they continue working due to an imbalance between abilities and demands, referred to as “work instability”

(23). However, they have not (yet) consulted a psychiatrist, occupational physician or general practitioner. Therefore, diagnosis alone may not be sufficient to understand work participation with a CMD in terms of functional limitations appearing at the workplace (24, 25). Consequently, our study population consists of either employees with clinically diagnosed CMDs (26) or employees with self-reported psychological complaints such as reduced concentration, irritation, fatigue or gloom (24). Since most people affected by CMDs or psychological complaints are employed and actually working, this phase whilst being at work needs increased attention.

In our attempt to answer the question *What works to continue working?*, we suppose that factors promoting work participation among employees with CMDs are known to some extent. Reviews on work participation among employees with CMDs reveal that staying at work and being productive is affected by individual factors such as higher symptom severity (e.g. a past history of absenteeism, co-morbidity), and work-related factors (e.g. high job demands, lower job control) (1, 7). In practice, efforts to promote work participation are often taken, such as psychotherapeutic treatment, to work part-time temporarily or to decrease the work load (18). However, it remains unclear *What really makes work work?* For example, how do employees try to manage their tasks while feeling depressed or anxious? What efforts are needed to promote the fit between the employee's abilities, tasks and the particular work context is not fully understood (1). Promoting work participation is complicated and challenging; and therefore requires a thorough understanding in order to act upon it. However, an explanatory framework on work participation with CMDs so far is lacking.

Whilst there seems little available knowledge on work participation of employees with CMDs that remain at work, there is substantial knowledge in the field of occupational health among employees with CMDs who were sick listed and in return-to-work trajectories (2, 17, 18, 20, 27, 28). In those review studies, the dynamics between individual factors, work-related factors and the work environment have been proven crucial and highly complex. Some empirical research has shown that the hidden, work-related factors such as sense of belonging, openness of the manager and a supportive relationship between managers and employees are factors that promote return to work (12, 29). As return-to-work can be considered as a complex multifactorial process, likewise the phase of working with CMD can be characterized as a dynamic interactive phenomenon (18). Although we can learn from those studies in other phases, such as returning to work, we have not yet understood sufficiently how employees with CMDs can continue working. Hence, there is a need for a theoretical



framework on the complexity of factors influencing work outcomes of work participation, and their underlying mechanisms, in order to develop effective workplace interventions (13, 30-32).

Beyond understanding which mechanisms lead to work participation, we attempt to understand under what (work) circumstances those mechanisms occur. Reviews on workplace mental health interventions revealed that studies often do not address organizational- or work factors, thereby missing the complexity of the social context in the work environment (21, 31-33). Nevertheless, some studies have shown that such interventions and its effectiveness highly depend on the context in which they are implemented (34-36). For instance, Cullen et al. (2018) indicate that the suggestion given by a personal coach for an employee to apply for a work modification is more likely to be taken up in an appropriate, supportive organizational culture (35). Since interventions are often implemented and evaluated in highly complex organizational contexts, capturing under what circumstances those interventions work deserves rigorous investigation (12, 30).

In response to the lack of a theoretical framework on work participation among employees with CMDs, we propose the Capability-for-Work model. We are interested to know if we can apply a heuristic model from a related concept in occupational health, namely to maintain employment among older employees. The Capability-for-Work model defines capabilities as functioning that the person is able to achieve, depending on his or her particular circumstances (37). This model incorporates various personal- and environmental (work) conditions, which enable employees to convert personal and work inputs into work capabilities (38). Also, it reflects the complex interaction of multiple personal- and work factors and its emphasis on the vast complexity of the work context (38).

Given the lack of evidence base on mechanisms and the (work) context to understand the complexity of work participation, we argue that it is needed to move from *What works*, to *What works, for whom, under what circumstances and how* (39). We aim to fill this knowledge gap by conducting a systematic literature review, contributing to the building of explanatory program theories. Earlier reviews assessed literature in a traditional way, by separately reporting personal- and work-related factors or the effect of its interventions (7, 8, 21, 32, 33, 40). However, the assessment of outcomes of interventions remains weak, partly because the methodologies that were used did not grasp the complexity of the (work) circumstances or did not address mechanisms of change (8, 32, 33, 40). Additional factors to the intervention itself, including circumstances related to the organizational structure, and mechanisms related to interpretations and efforts, will affect the effectiveness of the intervention (12). Evaluation studies such as randomized controlled trials (RCTs) are designed to show

us whether the intervention works (or not), and do not provide information on which of the intervention activities (planned or unplanned) led to improvements or in what context those improvements occurred (39). Furthermore, interventions in everyday practice are not controlled by trial protocols. There are calls for more rigorous evaluations that go beyond the identification of efficacy in a controlled evaluation setting, so it can inform policy and practice in terms of factors that may promote work participation in diverse workplaces (13). Realist research may provide a methodological answer to develop a theoretical framework (41). It is a theory-driven evaluation method that is designed for complex social interventions or phenomena, providing an analysis that is more explanatory in nature (42, 43). Both the need for theory building on the evidence base of work participation for employees with CMDs and the diversity of its measured outcomes underpin our rationale for conducting a systematic realist literature review (SRLR).

To our knowledge, a realist review on work participation among employees with CMDs has not been done before. The current paper reports on the protocol of a SRLR. The objective of this study is two-fold: 1) to provide insights in applying a realist approach to the review process, including the rationale, tools and procedures developed and used for identification, selection, appraisal and synthesis of included studies, and 2) to present a way to develop a framework with explanatory program theories on the emerging theme of work participation, among employees with CMDs.

## **2. Materials and methods**

### ***2.1. Rationale for systematic realist literature review***

Realist review was developed by Pawson et al. (2005) from the philosophical traditions of critical realism, which seeks to consider the complexity of causal relations when explaining social interactions and interventions (42). The aim of a realist synthesis of the literature is not simply to answer the question: "Does this intervention work?" but to answer a more complex series of questions: "What is it about this intervention that works? In what circumstances does this intervention work or not? For whom does the intervention work?" (41). A realist review does this by unpacking the theories embedded in descriptions of interventions, and by looking for the impact of context on the effectiveness of interventions (42). Whereas, post-positivism researchers use the empirical testing approach to understand what works, the realist approach involves an ongoing interpretative process to configure context, mechanisms and outcomes (41). More technically, realist synthesis searches for common underlying mechanisms that occur under what circumstances, also called context-mechanism-outcome

(CMO) configurations. Causality can only be suggested if there is an understanding of the context (C) in which a particular mechanism (M) generates an outcome (O) (41, 43). These CMO configurations regarding the outcomes SAW and WP can be retrieved from the realist synthesis, leading to so-called middle range program theories (44). This approach allows us to examine the diversity and complexity of observational and intervention studies reporting on the outcomes SAW and WP simultaneously, as well as quantitative and qualitative studies.

## **2.2. Definition of realist terms**

*Middle range program theories:* theories that lie between the working hypotheses from the researchers who design and evaluate an intervention and the all-inclusive systematic efforts to develop a coherent theory that may explain all of the observed uniformities of social behaviour, social organization and social change (45).

*Context:* context refers to “something that enables or disables the current mechanism of interest to fire” (p.54) (45). It often refers to the ‘setting’ of programs and research. As conditions change over time, the context may also reflect aspects of those changes while the program is implemented.

*Mechanisms:* mechanisms are underlying entities, processes or structures that lead to influence the outcome (46). This can refer to processes within the participant of an intervention or exposure, his or her resources or cognitive and emotional responses, typically related to the intervention or exposure being offered.

*Outcome:* an outcome is what can be measured in terms of impact across the target population, using measurable or measured indicators. Outcomes can be considered as quantitative or qualitative, and intended or unintended (44). Realist research combines the strength of both research paradigms, in which qualitative studies may provide causal explanations of mechanisms, whereas quantitative studies may distinguish regularities, patterns, and features of the population groups.

*CMO configuration:* describes the causal links between context, mechanisms and outcome considered as causative explanations pertaining to the evidence on the topic of interest (45).

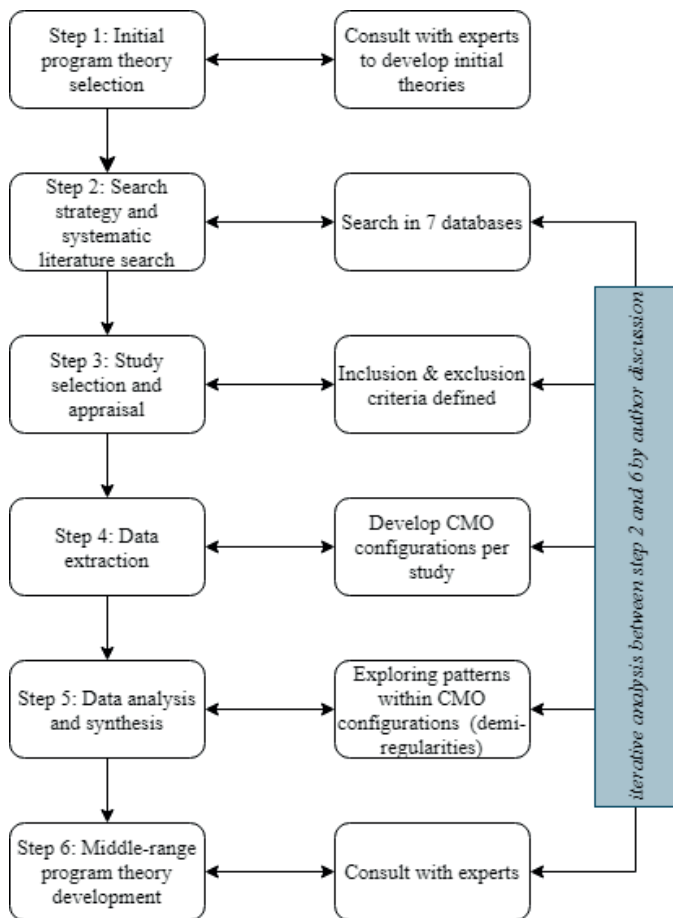
## **2.3. Procedures**

The SRLR follows the steps and procedures outlined by RAMESES publication Standards for Realist Synthesis in an iterative manner (47) (refer to figure 1). Regarding the search strategy (step 2), in which we conducted a systematic search of the literature, we adhere to the PRISMA guidelines for the

conduct of systematic reviews (48). Details of the protocol for this SRLR are registered on PROSPERO and can be accessed at [https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=108913](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=108913).

Our team consisted of researchers from various disciplines, namely public health, occupational health, sociology and psychology. As recommended in realist research, having a multidisciplinary team helped to shape our definitions and approach described in the protocol (41).

Figure 1. Overall realist review process.



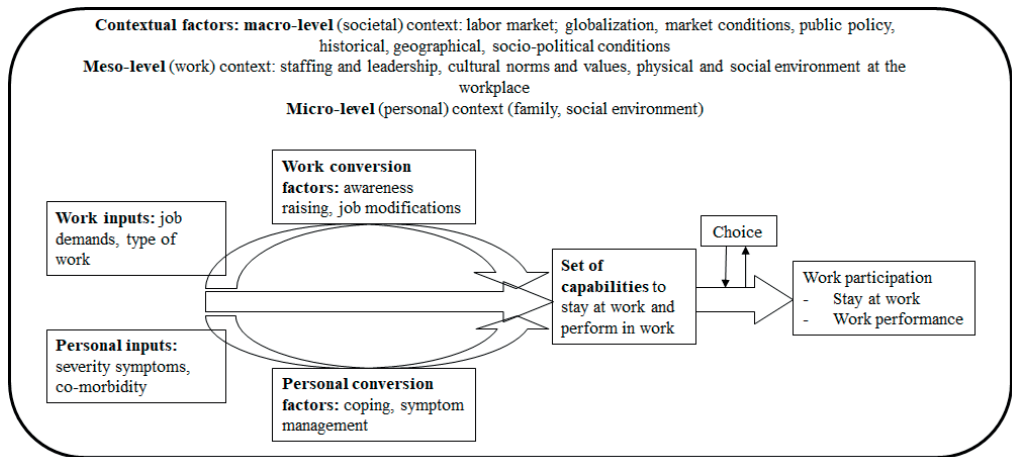
### 3. Results of the followed steps

#### 3.1. Step 1: select initial program theory

The overall focus in this SRLR is to select, test and ultimately revise an initial program theory, using academic literature. By drawing middle range program theories, we develop an explanatory framework

on both outcomes of work participation, SAW and WP. Given the complexity of work participation and the unknown scope and nature of the evidence base beforehand, we found it useful to initially define an initial program theory using a conceptual model. Van Der Klink et al. (2016) identified a conceptual model based on the concept of capability (37): the Capability-for-Work model (38). It incorporates the following work capabilities: 1) the use of knowledge and skills, 2) the development of knowledge and skills, 3) involvement in important decisions, 4) building and maintaining meaningful contacts at work, 5) setting own goals, 6) having a good income and 7) contributing to something valuable (38). We assume that work participation is determined by the way an employee succeeds in converting a combination of inputs and resources into capabilities and subsequently into valuable work functioning. Inputs are the personal resources (e.g. health, knowledge) or workplace resources (e.g. a set of tasks) and conversion factors refer to the process of converting one's inputs to tangible capabilities, resulting into work functioning that the employee chooses to achieve. Work functioning is defined and assessed in our study as *the employee is currently working* (SAW) and *how the employee functions at work* (WP) (refer to figure 2). We explore how the Capability-for-Work model could help us to interpret and summarize our findings. It challenges us to identify and order personal and contextual inputs and conversions from the set of retrieved mechanisms and contextual factors extracted from the selected studies. Those pre-existing conditions/circumstances, referred to as context, may act on macro level (existing public policy, historical, geographical, socio-political and labour market conditions), meso level (organization, staffing and leadership, cultural norms and values, physical and social environment at the workplace) and micro level (personal environment/personal resources and social environment of the employee). As suggested by Corbière et al. (2013), we also explore how the work outcome of Work performance (WP) possibly acts as a capability to achieve the work outcome of (the choice to) stay at work (SAW).

Figure 2. Model of the initial program theory on work participation, based on the Capability-for-Work model [38].



### 3.2. Step 2: developing a search strategy and literature search

We performed an electronic search in June 2020 in the following databases, Pubmed, Medline, PsycInfo, Embase, Cochrane, Cinahl, Web of Science, searching for scientific peer-reviewed studies describing factors or mechanisms on both SAW and WP for employees with CMDs. A total of 4,238 citations were retrieved. As from the end of the 20<sup>th</sup> century, mental health at the workplace gained increasing interest. Therefore, studies from the year 1995 and onwards were included. This search strategy captured SAW and WP in academic journals of various disciplines, including occupational health science, human resource management, organizational psychology, social sciences and medical sciences. In consultation with a health research librarian, we developed a search string and trialled iteratively (supplementary file 1 [link](#)). We used a combination of three groups of keywords, that is, employees with common mental disorders, stay at work or (reduced) work performance to search databases. These groups of keywords consisted of search terms from all seven databases: mesh terms (PubMed), thesaurus (psychInFO), and heading terms (CINAHL). Also, synonyms and free text words were used.

### 3.3. Step 3: study selection and appraisal

#### 3.3.1. Selection and inclusion criteria

Titles and abstracts were imported into EndNote and duplicate references were removed. Thereafter,

all references were imported into the software of Rayyan (49). Relevant screening consisted of two steps. First, two researchers dually assessed the studies' relevance with inclusion and exclusion selection criteria during the title and abstract screening (refer to table 1). This step led to a selection of 191 citations, from the 2,235 citations after removal of duplications. Next, two independent researchers (SH and BC; SH and EV) dually read the full texts and decided whether articles should be included for data extraction. We based the decisions on the selection criteria as well as whether the findings contribute to theory testing of the initial program theory and its refinement and thus contain contexts, mechanisms and outcomes of interest.

### 3.3.2. *Quality appraisal*

We used the Mixed Methods Appraisal Tool to appraise the methodological quality (the rigor) of quantitative studies, mixed method studies and qualitative studies (50). This tool contains of two screening questions and 25 items for appraising the methodological quality of five categories of studies: qualitative studies, RCTs, non-randomized studies, quantitative descriptive studies and mixed methods studies (51). Two independent research teams conducted the quality appraisal. We used studies of high quality (rated green) to form CMO configurations. Studies with medium quality (rated orange) containing possible informative mechanisms were only used to support CMO configurations derived from high quality studies. Studies which did not define a clear research question or in which collected data did not allow us to address the research question (answer a 'no' to screening questions, rated red) were excluded. After full text screening and quality appraisal, 61 articles were included.

Table 1 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> <li>- Primary outcome: stay at work, absence of absenteeism, continue working: subjects had to perform paid work, either part time or fulltime. If recorded as sick, subjects had to work for at least 50% within the first 6 weeks after their first sick day</li> <li>- Secondary outcome: quality of work: such as, presenteeism, reduced or impaired work capacity, work performance or workability</li> <li>- Employees having one or more common mental disorders, or employees having symptoms of mental health problems, who 'struggle at work', assessed with self-assessment tools.</li> </ul>	<ul style="list-style-type: none"> <li>- Studies including a general population of employees, and their mental health or employees targeted in primary stress prevention (not providing subgroups with employees at risk)</li> <li>- Where subpopulations of employees with CMDs were not taken as subpopulation in the data analysis</li> <li>- All severe mental disorders and personality disorders</li> </ul>

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| <ul style="list-style-type: none"><li>- If burnout score is based on the Maslach burnout inventory: only when sub analyses are done on the score on emotional exhaustion</li><li>- Individuals aged between 18 and 65 years</li><li>- Geographical/economic scope: at first: globally.</li><li>- Study design a primary research study and published in peer-reviewed journals, reporting randomized controlled trials, cohort, case-control or cross-sectional studies, or qualitative descriptive (case) studies.</li><li>- Published in English, from 1995 and onwards</li></ul> | <ul style="list-style-type: none"><li>- study on sickness absence, and thus reporting on employees on sick leave rather than still at work.</li><li>- Economic impact studies</li></ul> |
|---|---|
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#### *3.4. Step 4: data extraction*

In realist review, data extraction includes descriptions and explanations of how and why the mechanisms may (or may not) be triggered in a particular context, with regard to the selected outcomes (47). We drew up a digital data extraction form in order to record study information, including study characteristics (e.g. methodology, sample size), contexts, mechanisms and outcomes. For each study, we drafted one or more CMO configurations (refer to table 2). These configurations described how contextual factors (characteristics of employees with CMDs and their context) and mechanisms (human processes or responses) led to the desired outcome (SAW or WP). If mechanisms or contextual factors were retrieved on the dichotomous outcome of SAW (yes or no), or reported the reduced chance or risk on absenteeism or sick leave, then we converted this factor into a facilitator to stay at work. Thereafter, we imported the CMO configurations of each study in Excel, in order to develop a structured data collection format, ordering studies by outcome (SAW and/ or WP) and type of study (observational or interventional). Two independent research teams discussed the results, for cross checking to identify any inconsistencies or inaccuracies. From the 53 articles, 41 (77%) articles described outcomes regarding SAW and 33 (62%) articles reported about WP.



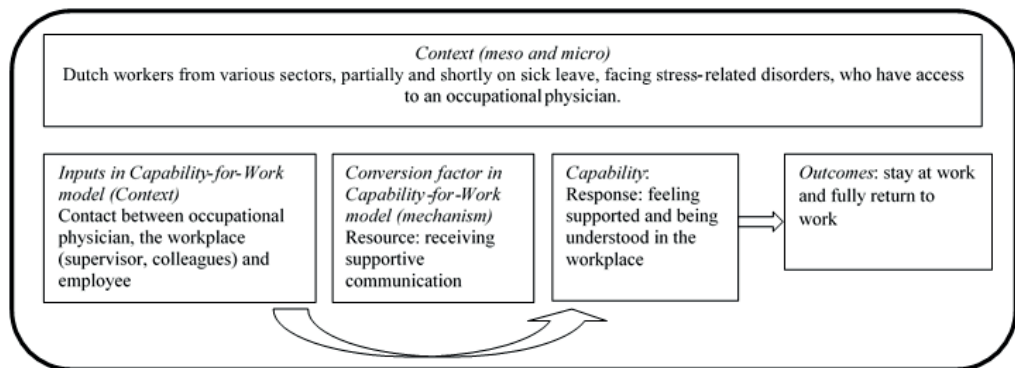
Table 2 Example of context-mechanisms-outcome configuration

<b>Context</b>	<b>Mechanism</b>	<b>Outcome relevant for study (Stay at work or work performance)</b>
11 Finnish male workers with stress and mood problems, versus 12 on waiting list [53].	Personal feedback and group meetings and participation in intervention decreased depressive symptoms so workability increases.	Positive effect on workability

### **3.5. Step 5: data analysis and synthesis**

We performed analyses by exploring patterns within these CMO configurations by thematic analysis, that led to middle range program theories (44). Firstly, after preliminary annotating and extracting data, studies showing similar CMO configurations were coded as barriers or facilitators, regarding each outcome. Those CMO configurations were sorted according to common themes in occupational health and refined in terms of mechanisms. Then, those configurations, categorized in themes, were embedded in a larger chronology of the outcomes, to identify and explain causal effects. Patterns of outcomes (also called demi-regularities) were identified and sorted, using 'if..., then...' statements). Using the thematic analysis leading to demi-regularities, we synthesized mainly from qualitative studies the various mechanisms that occur and under what circumstances those would lead to the outcome. The quantitative studies provided mainly CMO configuration containing of one mechanism, explaining its causal relationship with the outcome. Figure 3 shows an example of a CMO configuration, in which context, mechanism and outcome were distinguished, based on the Capability-for-Work model (initial program theory).

Figure 3. Example of CMO configuration, using the initial program theory [18].



### 3.6. Step 6: revised program theory

The final step of the synthesis will provide an explanatory framework for how, why and under what circumstances employees with CMDs stay at work and maintain their level of work performance. Hence, this step consists of confirming or modifying demi-regularities with the initial program theory, leading to middle range program theories. We are currently conducting this last step. We will choose demi-regularities were based on patterns observed in the CMO configurations of step 5. This process of confirming or modifying includes testing the Capability-for-Work model as an initial program theory as well as possible other candidate theories to explain or understand patterns. Accordingly, the analytic process involves iterative testing and refinement of theoretically-based explanations (47). Discussion in our research team ensures soundness and consistency in the analytic process of demi-regularities and development of the middle range program theories.

## 4. Discussion

Work participation of employees with common mental disorders is one of the key challenges in occupational health. Efforts to support those employees to continue working are important for individuals, organizations and the society as a whole, though often complex and challenging. Understanding work participation requires a rigorous approach. This review protocol provides useful insights on how to apply a realist synthesis in theory building on a complex phenomenon such as work participation among employees with CMDs. Besides, this paper demonstrates the application of a heuristic model to further understand work participation and therefore a new way to build on existing

theory. By using realist synthesis methods, we develop an explanatory framework resulting in a contextual understanding of mechanisms of work participation. Findings from the ongoing review are forthcoming. Subsequently, we will test this framework with various stakeholders, such as employers (line managers), employees with CMDs and several occupational health professionals. By testing and elaborating the program theories, we expect to know which conditions are necessary for the mechanisms to be triggered (39). This will result in strategies that are effective, efficient, and have a potential for successful implementation in daily practice. Those insights could help employers, policy-makers and researchers in the development of evidence-based interventions.

To the best of our knowledge, this is one of the first studies using realist research in the field of occupational health (39). This study thereby adds to academic literature on the use of a realist-based approach in the examination of evidence-based organizational occupational health interventions. Traditional systematic reviews might miss out on hidden mechanisms or on its factors interacting within a particular setting or context (7, 12, 39). Realist synthesis allows us to examine the heterogeneity and complexity of various studies reporting on the selected work outcomes, which led to a richer set of data. Also, based on the review process thus far, we suppose that realist synthesis may offer a deeper understanding of a wide range of factors and their interaction with the workplace. This protocol paper provides a step-wise approach on how to draw out patterns from such a diverse dataset, and advancing knowledge regarding conducting a realist review and develop program theories. This facilitates researchers to gain insights into the application of realist research in the field of occupational health and enhance the interpretation and critical examination of our review findings (47).

This is one of the first studies that investigates mechanisms and contexts of employees who continue working. This phase of stay at work in which the employee continues working focuses on the prevention of negative work outcomes. Given the relatively new concept of stay at work we choose for a *systematic* literature search, to achieve an overview, a level of uniformity and completeness regarding the evidence base covering employees with CMDs who are currently working. This paper adds on the conceptualization of stay at work by reporting our initial program theory, definitions of outcomes and, inclusion and exclusion criteria. Accordingly, we attempt to stimulate the debate among researchers on the understanding of work participation.

Underpinned and informed by an innovative model used in occupational health, this study provides insights on how to develop an explanatory framework on work participation for employees with CMDs. We used the Capability-for-Work model as an initial program theory to discover patterns of

outcomes leading to middle range program theories. This model seems useful in exploring patterns, considering a plethora of CMO configurations retrieved from data extraction. Consequently, it helps us to grasp the complexity of work participation. Because work participation is such a multifactorial phenomenon due to the important role of the work context, it deserves a model that can handle such complexity. Furthermore, understanding work participation through a different lens, namely of work capabilities, may add on theory development of this model for other, related work outcomes.

We have anticipated the following challenges common to many realist reviews. Firstly, because we work with published research, with predefined variables and measurements, we gain insights in how contextual factors, mechanisms, and outcomes have been measured and reported to date. However, often mechanisms are hidden and not explicitly described in the results section, resulting in a lack of in-depth information. Hence, we used information regarding context, mechanisms or implementation from the discussion section in publications, to capture more closely what is important in those mechanisms according to the authors (45). Secondly, retrieved factors were defined as mechanisms by some studies while other studies identified those factors as context or circumstances. This challenge refers to the so called 'ripple effect', in which a certain factor was configured as an aspect of the context, being a precondition, and other times as a mechanism (52). We responded to this challenge by incorporating the ripple effect within the program theory and by adhering to our presented definitions of context and mechanism (46). Thirdly, it was challenging to select and appraise studies on relevance and rigor. Since we allowed heterogeneity in the type of studies and measures of outcomes, this led to a variety CMO configurations with different levels of relevance or rigor. To overcome this, we used a systematic approach by two independent researchers in each step, using clearly defined concepts and inclusion and exclusion criteria to ensure relevance. In addition, we used the MMTA, a standardized tool for quality appraisal, to ensure rigor.

Possible limitations in our study are related to the design of the SRLR. Realist researchers acknowledge that there is not one way of conducting a realist review (41). As other review approaches may demand a systematic approach, realist review process is ultimately iterative and flexible, however transparent. Nevertheless, we decided to conduct a systematic database search, based on the limited evidence base of our topic of interest. Despite our sound reasons for the systematic approach, we did not use an iterative process of selecting other types of references than scientific peer-reviewed studies, thus in step 2 our review may not be a typical realist review. Furthermore, in step 5, we searched and examined ideas about the causal factors linked to the evidence, using CMO-statements which lead to

demi-regularities (44). However, we came across patterns or mechanisms without any causative explanations pertaining to the evidence. Those gaps will guide us to identify areas for further research. To overcome those limitations we report our selection, appraisal and analysis protocol adding to transparency and replicability of our review process.

## **5. Conclusion**

In conclusion, given the complexity to promote work participation, conducting a realist review adds on the understanding of the dynamics between personal- and work factors, the underlying mechanisms of work participation and the (work) context. Realist synthesis provides a way to gain insights into how work outcomes, such as staying at work or work performance in reality evolve. Our initial program theory, the Capability-for-Work model helps to explain how and when retrieved mechanisms and interventions lead to those work outcomes. This paper facilitates other researchers within the field of occupational health by demonstrating ways to develop a framework on work participation using realist synthesis. Findings from this SRLR will result in an explanatory framework on work participation among employees with CMDs. The framework will enable us to better understand how workplace interventions achieve the desired outcomes through evidence-based practices.

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## Chapter 3

### Towards a better understanding of work participation among employees with common mental health problems: a systematic realist review

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## **Abstract**

**Objectives:** Common mental health problems (CMHP) represent a major health issue and burden to employees and employers. Under certain conditions work contributes to wellbeing and participation of employees with CMHP. Promoting work participation is important, however the specific conditions in which work participation occurs is complex and largely unclear. This calls for a novel, realistic approach to unravel the complex relationship between outcomes, context and underlying mechanisms of work participation.

**Methods:** In the present realist review, peer-reviewed studies, conducted between 1995 and 2020, were systematically reviewed on the outcome measures Stay at work (SAW) and work performance (WP). The database search from seven databases identified 2235 records, of which 61 studies met the selection criteria and methodological rigor.

**Results:** The synthesis demonstrates how mechanisms and contextual factors on 1) organizational climate and leadership, 2) social support, 3) perceived job characteristics, 4) coping styles, 5) health symptoms and severity, 6) personal characteristics and 7) features of interventions, promote work participation. An explanatory framework, based on the Capability-for-Work model, presents a new set of capabilities leading to SAW and WP.

**Conclusions:** This systematic realist review revealed mechanisms and contextual factors that promote both work performance and stay at work for employees with common mental health problems. These show how the organisational climate, social support in the work context, job characteristics and certain capabilities enable employees with CMHP to participate at work. Our contributions and practical implications are discussed, providing valuable insights for employers, professionals and researchers in the development of evidence-based interventions.

## 1. Introduction

Work participation among employees with common mental health problems (CMHP) is an increasingly important, yet highly complex phenomenon (1). The complexity of work participation is that work can cause CMHP and on the contrary, it can be the solution to those who are affected by CMHP. Under certain conditions work contributes to the well-being and work participation of employees with CMHP. As the Organisation for Economic Co-operation and Development (OECD) calls for preventing instead of reacting to negative work outcomes such as sickness absence and reduced work capacity (2), a thorough understanding of how to promote work participation is needed. Common mental disorders refer to depression, anxiety disorder, or stress-related disorder (3, 4). However, a large number of employees who suffer from common mental health problems are undiagnosed and do not receive treatment (5). We also consider this group of employees at risk of negative work outcomes, as a consequence of psychological complaints. Since most people affected by common mental disorders or psychological complaints are employed and actually working, this phase whilst being at work needs increased attention (6, 7). Therefore, we use a relatively broad definition of employees with diagnosed mood, anxiety or stress-related problems as well as self-reported psychological complaints.

Previous studies on work participation among employees with CMHP show that staying at work and being productive is affected by individual factors such as higher symptom severity (e.g. a past history of CMHP, co-morbidity), and work-related factors (e.g. lower job control, job strain or a supportive work environment) (1, 8). While these studies give an insight in factors that promote or hinder work participation, it remains unclear what really makes employees with CMHP to effectively continue working? As work participation is both a means and a goal to promote one's level of work performance and to stay at work, we need to unravel these two aspects and how they interact, in order to develop effective interventions for employers (8, 9). Other reviews in occupational health concluded that the interaction between work outcomes, the underlying mechanisms and how actors in the work environment collaborate have been proven crucial to intervene effectively, and is not yet clearly understood (5, 10, 11). Therefore the present study addresses the recommendation to move from 'what works' to promote work participation to 'what works, for whom, under what circumstances and how' (12, 13). This calls for a novel approach in our attempt to understand work participation, in which realist research may provide a suitable methodological answer. Realist review was developed by Pawson et al (14) from the philosophical tradition of critical realism, which seeks to consider the complexity of causal relations when explaining social interactions and interventions (9, 14). It is a theory-driven evaluation method providing an analysis that is more explanatory in nature.

Our initial program theory to develop an explanatory framework for work participation is the Capability-for-Work model (15). This model is based on the concept of capability, as developed by Sen (16). The capabilities represent a person's opportunity and ability to achieve certain human functionings, taking into account someone's particular circumstances. Previous articles have applied the literature on human development and capabilities to the work context (17, 18). Among the many things that human beings might develop the capacity to do, employment and work are addressed as a functioning (19). Furthermore, following Sen (16), it is not enough to establish the sources individuals

have, but rather to consider what they can actually do or become with those resources to achieve certain (work) functionalities. These so called 'conversion factors' refer to the process of converting one's resources to tangible capabilities, resulting into work functioning that the employee chooses to achieve. In this, Bonvin (20) refers to personal conversion factors and social conversion factors, playing a key role with regard to capability for work.

In this study, work participation is operationalized by two work outcomes (21). The first outcome is stay at work (SAW), that is, '*the employee is currently working*' addressing a relatively new concept in the field of occupational health which has no uniform definition in the literature (22). We define SAW as continue working, indicated as no absenteeism or not being absent for more than 50% or no longer than 6 weeks (8, 23). Besides SAW, we are interested in different facilitators of work performance (WP), or '*how the employee functions at work*'. Work performance refers in the present review to subjective (self- or other rated) performance or objective (externally rated) performance (24). Derived from the Capability-for-work model, we hypothesised that work participation is determined by the way an employee succeeds in converting personal- and work inputs and resources (i.e., conversion factors) into capabilities and subsequently into work functioning such as SAW and WP (15).

To the best of our knowledge, a realist synthesis of evidence relating to stay at work and work performance for employees with CMHP has not been conducted thus far. In this study, we aim to create a better understanding of work participation by providing a robust, systematic overview of current knowledge and by developing an explanatory framework. To do so, this study adopts a systematic realist review (SRR) approach. The following research question guided this SRR: What mechanisms promote stay at work and work performance (work outcomes), for whom, under what circumstances and how, amongst employees with CMHP?

## **2. Materials and methods**

### **2.1. Identification and selection process**

For the sake of readability, in this section we briefly report the followed steps in the review process. A more detailed description of the review methodology is provided in Appendix B ([link](#)), including the identification and selection process, use of theory and appraisal tools, and data extraction and synthesis. The SRR followed the steps and procedures outlined by RAMESES publication Standards for Realist Synthesis (25). Details of the protocol for this SRR are registered on PROSPERO and can be accessed at [https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=108913](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=108913), and can be found in the published study protocol (21). Regarding the search strategy and study selection, we adhered to the PRISMA guidelines for the conduct of systematic reviews (26). All scientific peer-reviewed studies available between the 1<sup>st</sup> of January 1995 and the 26<sup>th</sup> of June 2020 were retrieved in this SRR. We conducted a computer-based search in the following databases, Pubmed, Medline, PsycInfo, Embase, Cochrane, Cinahl and Web of Science. An example can be found in Appendix A ([link](#)). Three independent authors, dually assessed the studies' rigor and relevance in each of the following phases using the selection criteria (referring to table 1): title and abstract screening, full text

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screening and quality appraisal using the Mixed Methods Appraisal Tool (MMAT) (27) and data extraction.

## ***2.2. Extraction and analysis process***

For each study, the research team drafted one or more context-mechanisms-outcome (CMO) configurations, first independently and later discussed dually. These configurations described the causal links between context, mechanisms and outcomes (i.e., SAW or WP). From each study, information from the methods, results and discussion section regarding relevant contextual factors or mechanisms leading to the selected outcomes were retrieved. Studies of high quality (see table 2) were used to form CMO configurations. Studies with insufficient methodological quality (answering 'no' to screening questions) were excluded and studies with risk of bias, rated as "medium quality", were only used to support CMO configurations derived from high quality studies. Several iterative steps were followed to explore patterns within the extracted CMO configurations to develop middle range program theories, using "if...(context), then...(outcome), because of...(mechanisms)-statements. Middle range program theories are based on at least two included studies. In the final stage of the synthesis, we developed an explanatory framework, using the initial program theory, to demonstrate what works, for whom, under what circumstances and how to stay at work and promote work performance.

Table 1. Inclusion and exclusion criteria.

<i>Inclusion criteria:</i>	<i>Exclusion criteria:</i>
<ul style="list-style-type: none"> <li>- Primary outcome: stay at work, absence of absenteeism, continue working, being at work: subjects had to perform paid work, either part time or fulltime. If recorded as sick, subjects had to work for at least 50% within the first 6 weeks after their first sick day</li> <li>- Secondary outcome: work performance: such as, presenteeism, reduced or impaired work capacity, quality of work or workability</li> <li>- Employees having one or more common mental disorders, or employees having symptoms of mental health problems, who 'struggle at work', assessed with self-assessment tools.</li> <li>- If burnout score is based on the Maslach burnout inventory: only if they score on emotional exhaustion as outcome for work performance</li> <li>- Individuals aged between 18 and 65 years</li> <li>- Geographical/economic scope: at first: globally.</li> <li>- Study design a primary research study and published in peer-reviewed journals, reporting randomized controlled trials, cohort, case-control or cross-sectional studies, or qualitative descriptive (case) studies.</li> <li>- Published in English, from 1995 and onwards</li> </ul>	<ul style="list-style-type: none"> <li>- Studies including a general population of workers, and their mental health or workers targeted in primary stress prevention (not providing subgroups with workers at risk)</li> <li>- Where subpopulations of employees with CMHP were not taken as subpopulation in the data analysis</li> <li>- All severe mental disorders and personality disorders</li> <li>- study on sickness absence, and thus reporting on employees on sick leave rather than still at work.</li> <li>- Economic impact studies</li> </ul>

### 3. Results

The search process yielded 2235 records, shown in figure 1. Screening on title and abstract led to the exclusion of 2,044 articles, resulting into 191 articles for full text screening. After full text screening and quality appraisal, 61 articles were included. One study was excluded due to insufficient methodological quality. Studies ranked as medium quality were characterised by relatively low response rates or incomplete outcome data, or missing information regarding adherence and randomization procedures. The majority of the studies used quantitative data (53), only seven studies used qualitative data and one study used mixed methods. Table 2 provides an overview of characteristics of the included studies per outcome. Below, we first present the middle range program theories which frame mechanisms and contextual factors that facilitate SAW, followed by the middle range program theories that facilitate WP.



Figure 1. PRISMA flow chart of study inclusion process.

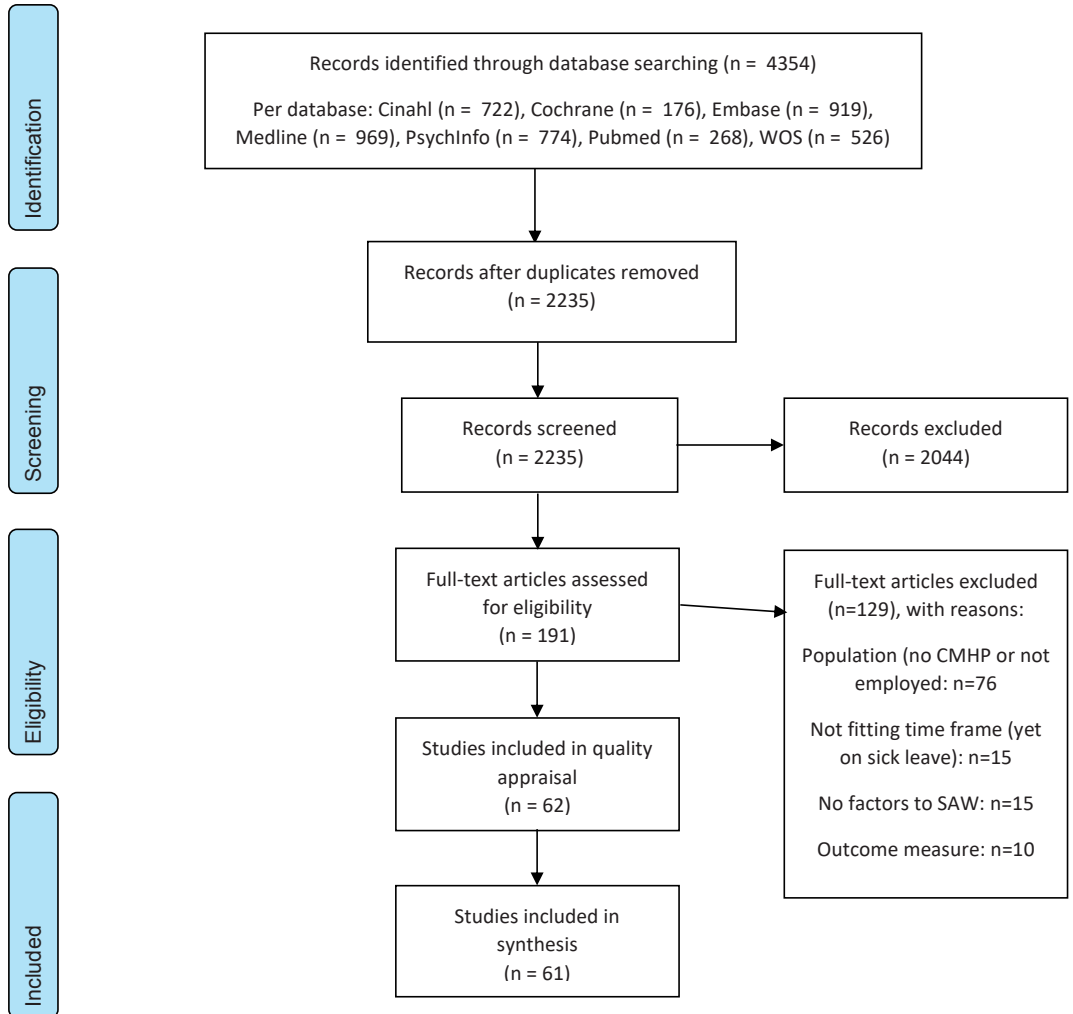


Table 2. Overview of the characteristics and design of the studies

Author and reference	Type of study and study methodology	n (number of participants)	Study population (type of employees/sector)	Country	Industry/type of employees	MMAT score (H = rated as 'high quality'; M = rated as 'medium')
<b>Articles reporting on both Stay at Work and Work performance</b>						
Arends et al 2019 (51)	Observational: latent class analysis (LCA)	n=158	Dutch employees with CMD, mostly highly educated, who are in Return to work trajectories	The Netherlands	Various sectors	M: 3/5: no data on representativeness, low n for LCA
Birney et al 2016 (54)	Interventional: parallel two group RCT	n=300	Employees with depression, mostly middle-aged, Caucasian, female, highly educated	USA	Unknown, part-time, fulltime and self employed	H: 4/5 blocked on race/ethnicity
Chen et al 2011 (69)	Observational: analytical cross-sectional study	n=452 (controls) n=226 (cases)	Taiwanese young workers with depressive disorder at psychiatric clinics	Taiwan	Micro electronics engineers	H: 5/5
Daley et al 2009 (60)	Observational: cross sectional descriptive	n=308 patients	Canadian patients with symptoms of insomnia and 147 with insomnia syndrome, of whom 76.4% worked day shifts	Canada	Unknown	H: 5/5
Danielsson et al 2017 (6)	Observational: qualitative	n = 27	Workers, of various ages and job types, suffering from common mental disorders	Sweden	Various sectors	H: 5/5
Duijts et al 2008 (45)	Interventional: RCT	n = 57 (int) n = 61 (control)	Dutch employees in three companies, with psychosocial health complaints, who are still working in health and educational sector at risk of sickness absence	The Netherlands	Health Education	H: 4/5 low adherence to intervention (49%)
Dunner et al 2001 (63)	Interventional: before after studies	n = 816	Patients with recurrent major depression who worked part-time or fulltime	USA	Unknown	H: 5/5
Ebert et al 2016 (53)	Interventional: RCT	n =263	German employees with elevated stress levels, various sectors, mostly women and medium or high educated	Germany	Economy, service, social, IT, health, other	H: 5/5

Evans-Lacko & Knapp 2018 (29)	Observational: cross sectional survey	n = 2985	Employees with self-reported depression from 15 different countries worldwide, mostly in Asian countries, from several sectors except marketing sector	15 diverse countries	Unknown, company size and working status varied	H: 4/5 Low response rate, representability of target population unclear
Hilton et al 2008 (41)	Observational: cross sectional study	n=60, 556	Employees in New Zealand and Australia working in large companies, high level of psychological distress	Australia New Zealand	Large public and private sector employers	H: 4/5 low response rate, blue collar underrepresented
Jha et al 2016 (81)	Interventional longitudinal study	n=331	Employed patients with nonpsychotic chronic or recurrent depression with current episode of more than 2 months	USA	Unknown	M: 3/5 missing information about int., adherence and drop out
Johnson et al 2015 (64)	Interventional: controlled trial, not randomized.	n=40 of whom 20 in int. group	Working health care professionals, aged 18-65 years, who are at least 50% or higher employee status. With major depressive disorder, single episode or recurrent	USA	Health care	H: 4/5: No subgroup analysis or confounders due to small group of participants
Lerner et al 2010 (39)	Observational: longitudinal cohort study	n=286	American employees with depression, despite occupational group, married, gender, recruited through primary health care centres	USA	Various sectors	H: 4/5: incomplete outcome data
Lerner et al 2020 (70)	Interventional: RCT	n=253	American veterans, with mild to moderate depression	USA	Veterans	H: 5/5
Plaisier et al 2010 (59)	Observational, descriptive longitudinal	n=1035	Dutch workers with common mental health disorders	The Netherlands	Unknown	H: 5/5
Plaisier et al 2012 (33)	Observational: cross sectional, descriptive	n=152	Dutch workers who have an employer or who are self-employed (5%) with depression or anxiety disorder	The Netherlands	Manual and non-manual jobs, self employed	H: 5/5
Richmond et al 2017 (36)	Interventional: prospective, quasi experimental	n=344	American employees, mostly female (71%), white (87%) and non-Hispanic (81%), average education was 16 years,	USA	Diverse in human service providers	H: 4/5 incomplete outcome data

	mental design		working for the government, with depression or anxiety			
Ridge et al 2019 (48)	Observational: Qualitative	n=73	73 Australian and English participants self-identified as having experienced depression	Australia United Kingdom	Professional or manual work	H: 4/5 quotes are rather general
Rost et al 2004 (47)	Interventional: RCT	n=198	American employed patients with major depression, mostly female (84.4), high school educated (88.5%), mostly full time employed (80%)	USA	Administrators, managers, sales people, services	H: 4/5 missing information on intended treatment and utilization
Sahlin et al 2014 (50)	Interventional: before and after study	n=33	Swedish female health care workers suffering from high level of stress	Sweden	Health care workers	H: Mixed method: 5/5 qual, 3/5 for quant: confounders not taken into account in analysis, not representative
Swanson et al 2011 (62)	Observational: cross sectional survey	n=367	American workers with any sleep disorder, with shift work	USA	White, grey, blue collar and shift workers	M: 3/5: low response rate, no validated questionnaire
Telle et al 2016 (67)	Interventional: RCT one factorial design with two groups	n=99	German employees who subjectively felt mentally distress due to work-related issues, voluntary participation	Germany	13 different private corporations and federal and public organizations	M: 3/5: incomplete outcome data and low adherence to intervention
Uribe et al 2017 (57)	Observational: cross sectional	n=107	Colombian employees with major depression or double depression (n=107)	Colombia	Unknown, employees part time, full time, self-employed	H: 5/5
van den Berg et al 2017 (40)	Observational: Cross sectional analytical	n=661	Dutch health care employees, mostly female and intermediate or high education, with a mental disorder	The Netherlands	Health care workers	H: 5/5
van Mill et al 2013 (44)	Observational: epidemiologic cohort study	n=707 CMD and 728 without	Dutch depressed or anxious individuals who work 8 hours or more	The Netherlands	Unknown	H: 5/5
Wang et al 2007 (55)	Interventional: RCT	n=604 of whom	USA-based employees with at least moderate	USA	Diverse Sectors: airline,	H: 5/5

		304 in int. group	depression, enrolled in a large managed behavioural health care company (insurance)		insurance, banking, public utility, government, manufacturing	
Woo et al 2011 (49)	Interventional: controlled trial	n=106 and 91 health controls	South Korean employees with major depressive disorder	Korea	Employees in highly industrialized areas	H: 4/5 incomplete outcome data
<b>Articles reporting on Stay at work</b>						
Chakraborty & Subramanya 2013 (31)	Comparision observational	n=43	Indian, industrial employees who work in an urban aeronautical industry who experience stress	India	Urban industrial employees	M: 3/5 selection bias
Cocker et al 2011 (56)	Observational descriptive survey data	n=320	Persons with life time depression	Australia	Various sectors	H: 5/5
Corbiere et al 2016 (28)	Observational: qualitative	n=22	Canadian, mostly highly educated employees with symptoms of depression	Canada	Public, private and non-profit sector	H: 4/5 Recall bias, currently not working but during last 5 years
Hammond et al 2017 (30)	Observational: Qualitative	n=6	Clinical psychologists in Australia who run a solo private practice, who experienced burnout maximum 2 years ago	Australia	Health care: psychologists	H: 5/5
Kawakami et al 1999 (65)	Interventional: RCT	n=81 in int, n=77 in control group	Workers, mostly male, who are distressed and employed in Japan	Japan	Manufacturing company	M: 2/5: no information on randomization, no baseline comparison between groups, adherence unknown
Keus van de Poll et al 2020 (43)	Interventional: RCT	n=100	Swedish, mostly government workers using occupational health services suffering from CMD or work stress	Sweden	Mainly public service employees	H: 4/5 not representative study population
Kok et al 2017 (32)	Observational: before and	n=122	Dutch employees with an affective disorder	The Netherlands	Unknown	H: 5/5

	after study					
Laitinen-Krispijn & Bijl 2000 (34)	Observational: longitudinal study, follow up 1 year	n=3695	Dutch male employees with major depressive disorder, dysthymia, simple phobia and substance abuse/dependence	The Netherlands	Unknown	M: 3/5: unclear outcome measure on duration of sick leave, few confounders
Leijten et al 2013 (37)	Observational: longitudinal study	n=354	Older employees with psychological problems (not specified)	The Netherlands	Unknown	H: 5/5
Lexis et al 2009 (58)	Observational: prospective cohort	n=3339	Dutch employees with depressive complaints, from various organizations and companies	The Netherlands	Various sectors	H: 5/5
Lexis et al 2011 (68)	Interventional: RCT	n=139	Dutch employees with depressive complaints, from various organizations and companies	The Netherlands	Office workers	H: 5/5
Linden et al 2011 (52)	Interventional: before after study	n=44 outpatients	German employees, with generalized anxiety disorder in outpatient departments	Germany	Unknown	M: 3/5 missing info on representativeness and confounders
Mackenzie et al 2014 (46)	Interventional: RCT	n=93	Australian workers with depression, generalizes anxiety disorder and social phobia	Australia	Unknown	M: 2/5: randomization not explained, loss to follow up
Noordik et al 2011 (23)	Qualitative	n=14	10 women and 4 men, ages between 25-58, mean age 38, partially returned to work	The Netherlands	Various sectors incl. health care	H: 5/5
O'Haire & Rodriguez 2018 (66)	Interventional: non RCT	n=141 in int., n=75 control	American veterans working elsewhere and who were identified with PTSD after 9/11	USA	Veterans	H: 4/5: 24,7% of population is working
Sado et al 2014 (61)	Observational: retrospective cohort	n=194	Japanese workers in a manufacturing company with repeated sick leave because of mental disorders	Japan	Manufacturing company	H: 5/5
Virtanen et al 2007 (38)	Observational: prospective study,	n=6663 female, n=1323 male	Finish local government employees and health care employees in public services with psychological distress	Finland	Public sector employees	H: 5/5

Vlasveld et al 2013 (101)	Observational: cross sectional	n=1425	Dutch workers with psychopathology (anxiety or depressive disorder)	The Netherlands	Unknown	H: 5/5
Woodall et al 2017 (35)	Qualitative: semi-structured interviews	n=15	English current or former service users with mental health conditions	United Kingdom	Unknown	H: 5/5
<b>Articles reporting on Work performance</b>						
Adler et al 2006 (72)	Observational; longitudinal	n=286	American patients with major depressive disorder (n=105) or dysthymia (n=72) or both (n=109)	USA	Mostly women 1) managers, professionals, and technicians ; 2) sales, service, and support;	H: 5/5
Beck et al 2014 (78)	Observational prospective cohort	n=432	American working patients, on routine depression treatment	USA	Unknown	H: 4/5: work context not in analysis
Bertilsson et al 2013 (74)	Observational qualitative	n=17	Swedish persons with CMD employed in regular job market, mainly women	Sweden	Private and public sector	H: 4/5 late reflection on data
Danielsson et al 2020 (84)	Interventional: pilot RCT	n=147	Swedish employees with CMD, mainly female, on work-directed rehabilitation	Sweden	Various sectors	H: 5/5
Furukawa et al 2012 (75)	Interventional: RCT non-blinded	n=108, of whom 58 in int. group	Japanese currently employed, mostly male, fulltime workers with minor depression at a large manufacturing company	Japan	Manufacturing company	H: 5/5
Haslam et al 2005 (71)	Observational: Qualitative	n=74	English workers with personal experience of anxiety/depression in the previous 2 years and who are mostly (2/3) uncompliant with medication	United Kingdom	Various sectors	H: 4/5 the interpretation of results insufficiently supported by data
Kim et al 2019 (73)	Observational: cross sectional	n=173	Korean workers with depression	Korea	Various sectors	H: 5/5
Lam et al 2011 (80)	Interventional: pilot study	n=31	Canadian health agency workers (predominantly women, above 40),	Canada	Health care	M: 4/5: small pilot study, self-referred to intervention, no

			with symptoms of depression, counselling is purchased by employer and self-referred to the EAP			confounders in analysis
Lappalainen et al 2013 (77)	Interventional: small scale RCT	n=11 int and 12 in control (waiting list)	Finish male workers with stress and mood problems	Finland	Unknown	M: 2/5: no information on randomization, self-assessed outcome, no blinding
Lindsäter et al 2018 (76)	Interventional: RCT	n=50 int. n=50 in control	Swedish employees (of whom 82% employed full time or part-time), with adjustment disorder or exhaustion disorder	Sweden	National sample	H: 5/5
Loukine et al 2016 (42)	Observational, cross-sectional	n=2528	Canadian workers with self-reported mood or anxiety disorders	Canada	Unknown	H: 5/5
Nigatu et al 2015 (79)	Observational: descriptive longitudinal	n=555	Dutch employees, currently having a major depression or anxiety disorder, mostly white collar workers	The Netherlands	Unknown	H: 5/5
Okajima et al 2020 (83)	Interventional: RCT	n=92	Young Japanese employees with insomnia	Japan	Mostly office employees	H: 4/5: many lost to follow up
Petersson et al 2018 (82)	Interventional: RCT	n=132	Swedish Patients with mild to moderate depressive disorder	Sweden	Various sectors, white collar, blue collar	M: 3/5: low adherence and incomplete outcome data
Rothermund et al. 2016 (102)	Interventional: controlled obs. trial	n=367	German employed patients of whom n=174 use psychotherapeutic consultation in the workplace	Germany	Three companies, unknown	H: 5/5

SAW = Stay at work, WP = work performance, RCT = randomized controlled trial, Int = intervention

Table 3 and 4 present the summary of mechanisms that facilitate each outcome, Stay at work and Work performance, respectively. To explain the causal relations between context, mechanisms and outcomes we describe each middle range program theory. Thereafter, we present our findings in an explanatory framework. Figure 2 and figure 3 depict *what works, for whom, under what circumstances and how*, refining the Capability-for-work model. In-depth information regarding the data synthesis of



CMO configurations per study, leading to the middle range program theories, is presented in Appendix B ([link](#)).

### 3.1. Stay at work

The mechanisms, presented in table 3, reveal how organisational climate, social support in the work context, and perceived job characteristics enable employees with CMHP to stay at work. Furthermore, coping, severity of mental health symptoms, the personal context and features of interventions are factors affecting the chance to stay at work.

Table 3. Mechanisms that facilitate Stay at work, among employees with CMHP

Theme of program theory	Mechanisms regarding Stay at work
Organizational climate	Open organizational climate
	Trustful and available supervisor
	Openness from supervisor
	Employee mirrors supervisor
Social support	Offered adequate and timely support
	Supportive relationships with colleagues and supervisor
	Meaningful relations at work
	Work-related social support: being heard about work-related problems
	Facilitator from independent professional
Perceived job characteristics	Supportive communication from facilitator: an encouraging attitude and knowhow about employment issues and workplace
	Manageable workload
	Low job demands/high job control through exerting control over own work
	Job modifications and making adjustments at work
Coping styles	Absence of overtime/over hours and high job strain
	Psychological flexibility
	Being highly motivated for work
	Talk about symptoms
Health symptoms and severity	Learning active coping skills, exerting control over own work, gaining mastery of symptoms, adjusting and evaluating workload
	Good self-reported health
	No additional health complaints
	Individual treatment: pharmaco-/psychotherapy, stress reduction programs
	Better work performance (productivity)
Personal context	Decreased exhaustion
	Increased cognitive functioning
	Previous sick leave due to CMHP
Features of SAW interventions	Personal resources (being married)
	Financial resources (owning a house, being self-employed)
	Multiple components
	Use of online or telephone support in addition to face to face care
	Tailoring care, to transfer skills into daily life

#### 3.1.1. Middle range program theory 1: Organizational climate

A trustful relationship in which the supervisor shows openness to talk about mental health conditions in an open climate in general, may contribute to stay at work among employees with depression, because (a lack of) openness by supervisors is mirrored by employees (28, 29).

#### 3.1.2. Middle range program theory 2: Social support

Adequate and timely social support and supportive relationships, from colleagues but particularly supervisors who are willing to assist and listen to work related problems, increase the chance to stay at work among employees with CMHP, because this helps to obtain a manageable workload (23, 30-34). Facilitation, by either a mental health professional or job retention specialist, who 1) acts independently, with sympathy and pragmatism, 2) provides an expert insight and 3) is familiar with the work place, also improves the likelihood to stay at work (23, 35, 36).

#### *3.1.3. Middle range program theory 3: Perceived job characteristics*

There is an inconsistent pattern with regard to low job demands and job control and its effect on stay at work. A possible program theory, based on CMO configurations, could be that experiencing low job demands and high job control helps an employee to exert control over one's own work, including adjustments that can be made (32, 33, 35, 37-40). Heavy work load, over hours and high job strain reduce the chance to stay at work, among employees with stress or depression (28, 30, 31, 38). Job modifications help to stay at work, however in a different way for white-collar and blue-collar workers, due to the type of duties and work context (23, 30, 41-43).

#### *3.1.4. Middle range program theory 4: Coping styles*

A lack of adaptive skills, due to reduced psychological flexibility and a different perspective on situations, reduces the capacity to bear responsibilities, which in turn has a negative effect on stay at work (30, 32, 44). Useful coping skills to stay at work are: being more alert on signals of reduced mental health, reading and understanding own signals, exerting control over one's own work and workload, balancing positive and negative influences of work, making adjustments and informing colleagues, protecting oneself, taking control, and being assertive (23, 28, 30, 35, 37, 45-49). Also, being highly motivated towards the job (and therefor readiness to SAW) increases the likelihood to stay at work (23, 31, 50, 51). Adversely, employees who do not talk about their depression, hide themselves or deny their symptoms have a higher risk of absenteeism (6, 28-30, 34, 48). Improving active coping skills and advancing self-management in daily life subsequently contribute to stay at work (36, 46, 50, 52-54), by addressing work in counselling besides personal problems (36, 43, 55)

#### *3.1.5. Middle range program theory 5: Health symptoms and severity*

Better mental and physical health contributes to stay at work, because the employee's experience of lower severity of symptoms leads to improvement in work performance (by increased cognitive functioning or decreased exhaustion) (30, 33, 39, 56-60). Likewise, facing additional health complaints as well as previous sick leave, decreases the chance to stay at work (44, 56, 60-62). Interventions offering psychotherapy or pharmacotherapy seem effective to stay at work, more than preventative treatment or stress reduction interventions (45, 47, 50, 52, 54, 62-68).

#### *3.1.6. Middle range program theory 6: Personal context*

Personal characteristics may contribute to stay at work, based on possible underlying mechanisms such as financial drive by owning a house, being self-employed, or being married (30, 33, 38, 56).

Employees with depressive disorders who had more life events, personal problems or exposures in other life domains than work may experience tension or confusion about symptoms, leading to more absence days (28, 30, 38, 69).

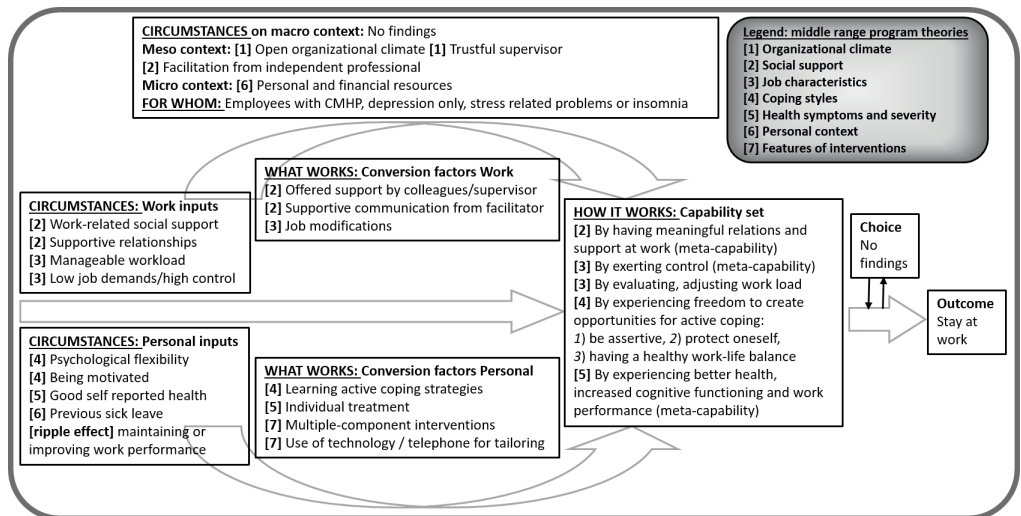
### 3.1.7. *Middle range program theory 7: Features of interventions*

If interventions focus on multiple components, for example if they target both personal inputs (symptom reduction and coping with symptoms) and work inputs (coping at the workplace or a better work related health), this may lead to an increased likelihood to stay at work (35, 46, 47, 49, 50, 52-54). In these interventions, using online or telephone support systems in addition to face-to-face care is successful, because 1) it increases adherence and better access to early and regular screening and 2) it tailors messages to needs and integrates learned skills into daily life (46, 47, 53-55). Preventative, worksite based, job retention interventions or adding a work-focused intervention to integrated care did not seem effective on the outcome of stay at work (45, 67, 68, 70).

### 3.1.8. *Explanatory framework to stay at work based on the Capability-for-Work model*

Based on the initial program theory and the presented middle range program theories, figure 2 depicts an explanatory framework for SAW. The mechanisms (the 'how') are mainly to be found under conversion factors and the capability set. The circumstances that facilitate SAW are to be found under Context on macro, meso, micro level and Personal- and Work inputs. We suppose that employees with CMHP can realize to stay at work through the following set of capabilities: a) by having meaningful relations and social support at work, b) exerting control, c) by evaluating and adjusting the workload, d) by experiencing freedom to create opportunities for active coping, e) by experiencing better health, increased cognitive functioning and work performance. Those capabilities reflect the employee "being able" as well as "being enabled"(15). We also found the so-called 'ripple effects', in which the outcome of one CMO configuration became the context or mechanisms for the next in the chain of causality. For example, interventions on symptomatology (mechanism) seem to reduce the severity of symptoms (outcome). This outcome acts as an input (severity of symptoms) on staying at work (outcome).

Figure 2. How to stay at work: framed by Capability-for-Work model, based on 45 studies.



### 3.2. Work performance

Table 4 presents the summary of the mechanisms that facilitate work performance (outcome 2) for employees with CMHP. Five middle range program theories are proposed on how social support, perceived job characteristics, coping styles, health symptoms and severity and features of interventions promote the employee's work performance respectively.

Table 4. Mechanisms that facilitate Work performance

Theme of program theory	Mechanisms work performance (outcome 2)
Social support	Managerial support, after training
	Trust and empathy received by employee
	Continuous practical job support from colleagues or supervisor
	Social support at work and at home or from clinician
Perceived job characteristics	Perceived low demands and high control
Coping styles	Avoid façade, to compensate shortcomings is counterproductive
	Learning to manage job
	Reach out for supervisor support
	Reconsider ones attitude to work
	Calming mind and retrieve space
	Learning to cope with symptoms
Health symptoms and severity	Good self-reported health,
	Lower severity / less symptoms
	Absence of chronicity or additional health complaints
	Individual treatment: psychotherapy, pharmacotherapy
Features of work performance interventions	Increased cognitive functioning
	Use of technology
	Tailoring care, to transfer skills into daily life

### 3.2.1. *Middle range program theory 1: Social support*

A work environment where supervisors feel comfortable to offer help and support to employees, helps employees to feel motivated and valued, which in turn may have a positive effect on their job performance (29, 71). Practical job support from colleagues and managerial support from supervisors, offered continuously while functioning at work despite CMHP, helps to improve work performance, because of trust and empathy received by the employee (6, 29, 33, 48, 51, 69, 71).

### 3.2.2. *Middle range program theory 2: Perceived job characteristics*

There is inconclusive evidence on interventions regarding job characteristics and their beneficial effect on work performance among employees struggling with CMHP. Some studies suggest the combination of (perceived) high job demands and low job control may reduce work performance among employees with CMHP (39, 40, 72). However, other studies contradict this suggestion (33, 73).

### 3.2.3. *Middle range program theory 3: Coping styles*

If employees with CMHP experience reduced capacity to work, they initially use working facade strategies (such as increasing hours or taking work home), compensating possible shortcomings to avoid reduced performance, because of fear and perceived stigma from colleagues and supervisor. However, these strategies seem counterproductive, as they result in emotional exhaustion, dissatisfaction and loss of refuelling in the long run (6, 41, 71, 74). Interventions (e.g. counselling) prove to promote work performance because they improve effective coping styles for the long term. Examples of these interventions are 1) to reconsider one's attitude to work, 2) to reach out for supervisor support, 3) to learn new approaches to manage job demands, and 4) calming the mind and retrieving space for recovery (6, 36, 39, 53, 54, 67, 75-77).

### 3.2.4. *Middle range program theory 4: Health symptoms and severity*

Self-rated health and severity of symptoms are important predictors of work performance among employees with depression, anxiety or sleep disorder, because once the employee experiences less symptoms, work productivity improves (39, 57, 59, 62, 72, 78). Chronicity of symptoms has shown to reduce work performance (33, 51, 59, 79). Interventions to reduce symptoms result in increased cognitive functioning, a pro-active attitude towards change, better mental-interpersonal task performance, improved time management and output, and subsequently to increased work performance (36, 47, 49, 50, 53, 55, 64, 67, 76-78, 80, 81). Among employees with stress, interventions improve stress recovery and symptom management, which subsequently leads to improved productivity (50, 53, 64).

### 3.2.5. *Middle range program theory 5: Features of interventions*

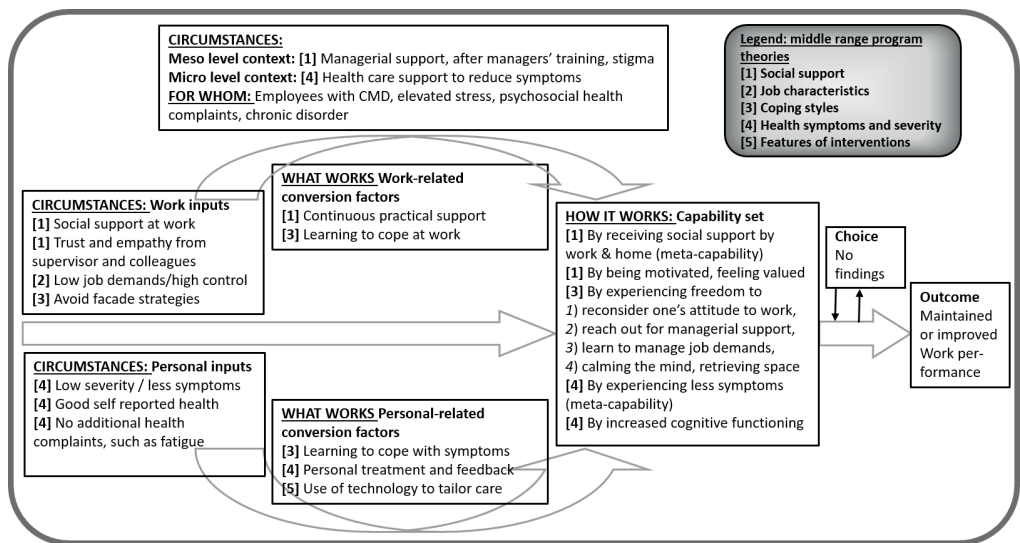
Interventions that use technology, through email, phone or app, may reduce mental health symptoms as well as work limitations. The use of these technologies helps to better monitor the employee's

behaviour, by tailoring the interventions with personal feedback, fostering belief changes and facilitating the transfer of training components to daily life (53, 55, 70, 76, 77, 80, 82-84).

### 3.2.6. Explanatory framework on work performance based on the Capability-for-Work model

An explanatory framework on how to realize work performance among employees with CMHP is presented in figure 3. This figure illustrates that both personal- and work-related conversion factors promote work performance through a set of capabilities. The capability set consists of a) receiving social support from work and home, b) being motivated and feeling valued, c) experiencing freedom for active coping, , d) experiencing less symptoms and increased cognitive functioning. Where work performance acts as a goal (outcome on its own) it also acts as a capability to stay at work. This may support the idea of meta-capability suggested by Venkatapuram (2011): being a capability in itself and also conditional (contextual factor) for achieving other capabilities (85). Capabilities may or may not result into work outcomes due to constrained or limited choices, as proposed in the Capability-for-Work model. Unfortunately, the included studies did not provide insights in the opportunity to make individual choices to achieve both work outcomes (see figure 2 and 3).

Figure 3. How to promote work performance among employees with CMHP, framed by Capability-for-Work model, based on 39 studies.



## 4. Discussion

This paper provides a systematic realist review of studies that have assessed work participation among employees with CMHP. This review (1) contributes to the development of a more uniform definition of the concept Stay at work among the study population at risk of negative work outcomes due to CMHP, (2) identifies mechanisms that promote work participation through the outcomes of

Stay at work and Work performance, (3) sheds light on how the work context may promote work participation in practice and research, and (4) provides an explanatory framework using middle range program theories, based on the Capability-for-Work model. These contributions, their implications for practice and future research as well as the limitations of the present study are discussed below.

#### **4.1. Contributions of the present study**

The present study adds to our understanding of the complex, multifactorial process of work participation for employees with CMHP. The overall findings of this review are consistent with the findings of previous reviews on related outcomes, finding theoretical support for the dynamic interrelation between personal factors and work-related factors leading to work participation for employees with CMHP (5, 8, 86). However, our review also shows *how* social support in the work context, perceived job characteristics, coping styles and better experienced health may promote work performance and stay at work. Furthermore, insight is given in how organizational climate and personal context promote staying at work, and what features of interventions seem effective. In addition, the findings of this review shed light on underlying mechanisms towards an adequate, supportive, work environment that enables employees with CMHP to stay at work. Because we used a systematic realist review approach, rather than summarizing factors that may not provide insights into causal relationships, we were able to “unpack” each mechanism, and reveal under what circumstances these mechanisms lead to the outcome of interest. In this way, it explains what often is experienced by practitioners in individual cases and is hard to support by empirical evidence due to averaged, usually small effects in quantitative studies.

Notwithstanding all efforts regarding preventative mental health interventions, our findings call for more attention to employees already facing CMHP in the work context, in line with the recommendations of the OECD and other researchers (5-7, 87). We operationalized SAW in such a way that it includes employees with CMHP who are currently working, or are partly reported sick. Interestingly, we observed in the review process that the current research agenda is still focused on absenteeism and return to work concerning employees with CMHP rather than SAW, despite the growing evidence base on prevention and positive psychology in the general working population (88). A possible explanation could be that the phase of being on sick leave or absent as a negative work outcome is directly related to costs of employers and the society as a whole and thus of a greater interest in research and practice. Besides, being absent is more visible than being at work while being affected by CMHP. Signals of CMHP usually develop silently and slowly, making it harder for employers to signal and intervene. Also, CMHP are often stigmatized, making it hard for employees to disclose or not disclose about their condition towards their employer (89). This supports our decision to include both diagnosed and self-reported common mental health problems in this study. To gain insight in the promotion of work participation in a group of at-risk employees, we choose not to emphasise on the, highly discussed, boundary between normality and pathology. Because complaints are often dynamic and fluctuating, such a clear distinction is not necessary for the purpose of this

review. We found that the mechanisms and contexts to promote work participation apply to those employees with psychological symptoms in the subthreshold group, to those who did not seek help or had no access to care, as well as to employees with a diagnosed common mental disorder.

Regarding the retrieved mechanisms, more attention in the scientific literature was given to (intervening on) personal factors than work-related or organizational factors. This implies that in interventions that promote work participation, efforts and effects seem to be attributed to the person, rather than to the work situation. This is not in line with the literature showing that work-related factors have great causal effects on sustainable work participation among the general working population. For example, the Job-Demands Resource theory suggests that in order to effectively continue working despite facing CMHP, solutions can be found in the work context and job designs, more than intervening (only) on personal factors (90). Besides, despite our study approach to search in each included study for contextual factors, it was difficult to identify the organizational circumstances in which each mechanism or outcome occurred apart from the pre-defined intervention components. However, even if organizational circumstances were not analysed explicitly, we succeeded to identify mechanisms that refer to the role of employers in supporting employees to stay at work (receiving supervisor support, being offered job modifications). This supports the evidence regarding the important responsibility of employers in facilitating employees with CMHP (13, 86, 91, 92). Therefore, more insight into work-related mechanisms and circumstances leading to stay at work is needed, to develop effective organizational interventions for employees with CMHP (93).

The use of the Capability-for-Work model contributed to the findings of our review in three ways. First, considering the plethora of CMO configurations derived from 61 studies, this model helped us to arrange factors and understand causal effects and underlying mechanisms. As such, we could distinguish inputs (pre-existing work- or personal factors that are often non-changeable) from conversion factors and capabilities (often changeable). Mechanisms (how and why), through a Capability approach lens, were identified as conversion factors and capabilities. More specifically, we found that both personal conversion factors and social, work-related conversion factors are needed to realize capabilities to work (20). The framework adds to the understanding of causal relationships between all factors and the outcomes SAW and WP. Nevertheless, we emphasize that what may be a conversion factor or capability for one employee, can be a pre-existing personal factor for the other. Second, our review contributes to the development of the Capability set for work, defined by Abma et al (94), in a way that we add upon their seven capabilities, by presenting specific capabilities for employees with CMHP. For example, the capability of building and maintaining meaningful contacts at work, is elaborated in our study by the capability of receiving work-related social support and having meaningful relations with the supervisor and colleagues. Third, using the Capability-for-Work model, our review reveals that it is not the medical condition itself, but its interactive effect with work performance and circumstances that influence the employee's functioning at work and ability to stay at work (95). Therefore, it will be more interesting to investigate whether employees are "being able" and "being enabled" to participate in work, and thus to unravel which set of capabilities is needed to do so, rather than solely to assess their medical condition. In this way we highlight the importance of



placing work participation in a wider spectrum of human development, shifting the focus from having a mental health condition as an impairing factor to the establishment of capabilities and choices (96).

#### **4.2. Implications for practice**

This review provides valuable information to employers and occupational health professionals as to what implications they should focus on in order to promote work participation for employees with CMHP. The first practical implication refers to the importance of multilevel interventions from employers, addressing overarching themes on an organizational- and team-level combined with tailored interventions on the individual level. Employers could improve the work situation of employees with CMHP and the teams and organisational culture they work in, by creating a socially safe, open working climate. On the individual level, employers could ask employees who are having a hard time at work what they can still do despite their problems, and what they need in their job or in the work context in order to stay at work. This way, the employer enables the employee to convert inputs and resources into capabilities. Employers should seek for advice from occupational health professionals, since they can support on different levels and on both sides, the employer as well as the employee with CMHP.

Next, we highlight the need for early intervention, and suggest professionals to find ways to assess and intervene on capabilities and work performance before employees report sick, besides assessing the employee's (severity of the) condition or other pre-existing personal factors. Occupational health professionals can discuss individual short-term adjustments in the job or work context with the employee and employer. For long term solutions, those professionals can support employers to detect a mismatch between the employee's capabilities and the work (context).

In line with addressing employee's abilities rather than problems, we recommend two ways to increase employee's experience of freedom, in the literature often referred to as autonomy. On the side of health care and psychological treatment of individuals with CMHP, we recommend (mental) health care professionals to address work-related problems in the consultation, to transfer lessons learned, such as active coping, to the work context. Likewise, we urge employers to facilitate work and a work environment where lessons learned can be practiced by employees, by enhancing autonomy or facilitating temporary job modifications (97). This may have the twofold effect of increasing employee's capabilities and employee engagement as well as contributing to mentally healthy workplaces (95).

Finally, providing continuous social and practical support at the workplace is crucial to promote work participation. Employers should take preventative measures whilst the employee is still at work, for example by educating supervisors and colleagues on reading signals and talking about mental health. Also, employers can increase supervisors' skills on ways to offer support to employees and increase knowhow of situations that require referral to occupational health professionals.

### **4.3. Recommendations for future research**

The following recommendations for future research result from this study. First, our review showed that work performance acts as a meta-capability to stay at work, illustrating a possible parallel link between CMHP and the level of work performance during the phase of staying at work (98, 99). Further research is needed to test the link between both work outcomes, verifying whether and how work performance can be used as a means to decrease the severity of CMHP, resulting in an increased chance to stay at work. Second, additional research is warranted to further develop the Capability-for-work model on work participation for employees with CMHP. We recommend the use of empirical data to test the newly presented set of capabilities among employees with CMHP in work participation. Besides, to further explore the causal relations presented in the explanatory framework, mean correlations that exist in the study population on group level could be tested, but also underlying mechanisms that occur on an individual level. Third, we recommend realist evaluation as an approach to “unpack” underlying mechanisms and contextual factors in order to develop effective organizational interventions. As our research included only one mixed methods study and few qualitative studies, we cannot emphasize enough on the integration of process and outcome evaluation, using novel, mixed methods evaluation designs (12, 100).

In a next step, based on our review results, we will develop and evaluate a multilevel workplace intervention. This intervention aims to improve supervisor's skills and competence to support employees with CMHP and to create a work context that promotes work participation.

### **4.4. Strengths and limitations**

This systematic realist review provides a comprehensive overview of mechanisms and contextual factors promoting work participation. By using a realist approach, we succeeded to unravel mechanisms and their causal relationship with the work environment and selected outcomes. The realist data extraction- and data analysis process was time-consuming. However, it seemed valuable as the rigor understanding of not only what works, but also under what circumstances and how work participation occurs resulted in more practical contributions. Furthermore, we stimulate the debate among researchers on the understanding of work participation by contributing to theory development of the Capability-for-work model regarding various work participation outcomes.

The present review has a number of limitations that must be addressed. First, it could be argued that the heterogeneity in the type of studies and measures of outcomes led to CMO configurations with different levels of relevance or rigor. To overcome this, two researchers conducted each review step independently, using clearly defined concepts and inclusion and exclusion criteria and assessment tools. Also, the researchers discussed every defined CMO configuration. A second limitation refers to the dichotomous outcome of Stay at work. Due to the inconsistent definition of SAW in the literature, we screened a plethora of studies using the opposite outcome of stay at work, reported as absenteeism or sickness absence. Barriers leading to absenteeism are not automatically facilitators of staying at work, so the outcome of absenteeism is not irreversible as such. Therefore we

only included studies that compared employees with CMHP who were absent to similar employees who stayed at work. A third limitation is that although we used information regarding context, mechanisms or implementation from the discussion section in publications, the contextual information was only explicitly provided to a certain extent (study population, employment sector). Where information regarding the context of the study was not given, we cannot know under what circumstances certain interventions work. This is a common limitation of realist synthesis and, therefore, is also relevant to our study. For an in-depth discussion on the use of realist research, we refer to our protocol paper (21).

#### **4.5. Concluding remarks**

This systematic realist review revealed mechanisms and contextual factors that promote both work performance and stay at work for employees with CMHP. In these situations, the work environment can support employees to participate at work. Program theories using a realist approach reveal how the organisational climate, social support in the work context, and perceived job characteristics enable employees to participate at work. Furthermore, coping styles, severity of mental health symptoms, the personal context and features of interventions enable employees to participate at work. By providing an overview of recent scientific literature, this study provides valuable insights and practical implications for employers, occupational health professionals and researchers in the development and evaluation of evidence-based interventions. Novel explanatory frameworks, based on the Capability-for-Work model, present causal relations between personal- and work factors and a set of capabilities leading to SAW and WP. Finally, the study adds to the debate on using novel methodological research approaches such as realist synthesis, answering what works, for whom, under what circumstances and how.

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## Chapter 4

### Promoting factors to stay at work among employees with common mental health problems: a multiple-stakeholder concept mapping study

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## **Abstract**

Most individuals affected by common mental health problems are employed and actually working. To promote stay at work by workplace interventions, it is crucial to understand factors perceived by various workplace stakeholders, and its relative importance. This concept mapping study therefore explores perspectives of employees with common mental health problems (n=18), supervisors (n=17) and occupational health professionals (n=14). Per stakeholder group, participants were interviewed to generate statements. Next, each participant sorted these statements on relatedness and importance. For each group a concept map was created, using cluster analysis. Finally, focus group discussions were held to refine the maps. The three concept maps resulted in several clustered ideas that stakeholders had in common, grouped by thematic analysis into the following meta-clusters: A) Employee's experience of autonomy in work (employee's responsibility, freedom to exert control, meaningful work), B) Supervisor support (being proactive, connected and involved), C) Ways to match employee's capacities to work (job accommodations), D) Safe social climate in workplace (transparent organizational culture, collective responsibility in teams, collegial support), and E) professional and organizational support, including collaboration with occupational health professionals. Promoting Stay at work is a dynamic process that requires joined efforts by workplace stakeholders, in which more attention is needed to the interpersonal dynamics between employer and employee. Above all, a safe and trustful work environment, in which employee's autonomy, capacities and needs are addressed by the supervisor, forms a fundamental base to stay at work.

## 1. Introduction

Under certain conditions staying at work for individuals with common mental health problems (CMHP) contributes to their wellbeing and mental health, but also has positive consequences for employers and society, such as reduction of absenteeism (1, 2). Since most individuals affected by CMHP are employed and actually working, this phase of staying at work needs more attention (2, 3). Interestingly, nearly 40% of a representative panel of Dutch employers does not know how to help employees with CMHP in the workplace (4). One explanation may be the course of CMHP, in which symptoms appear through implicit or ambiguous signals, usually developing stealthily and slowly. Another explanation could be stigma and lack of openness on the work environment about mental health (5, 6). For both the employer and employee, those reasons may lead to inability to acknowledge the problem, and therefore employees continue to use (short term) compensatory strategies and seek for help too late (7). Employers remain confused about best practices for workplace mental health interventions, especially on each stakeholders' role and responsibility (8). Therefore, we need to provide workplace stakeholders with clear directions on ways to enable employees with CMHP to continue working.

The perspectives on what employees with CMHP need to stay at work may differ between employee, employer and occupational health professional, as shown in earlier research on return to work (9-11). This could be because each stakeholder may have different interests and goals. Employers want to prevent long-absenteeism so they prefer to know what problems the employee faces. Opposing, the employee might prefer to continue working without reporting problems, due to fear to lose income or career perspective. Moreover, among workplace stakeholders there may be a hierarchy in power relationships. Therefore, it is important to gain insight into what each stakeholder group in the work context regards as important to stay at work for employees with CMHP, including the similarities, differences and relative importance.

The experience of illness in the workplace has been reported in previous studies regarding employees with physical complaints (12-14), however little among employees with CMHP who continue working (3, 7). Previous studies on work participation among employees with CMHP show that work functioning and work performance are affected by individual factors (e.g. symptom severity, co-morbidity), and work-related factors (e.g. high job demands, lower job control) (7, 15, 16). Interventions are often focused on individual (psychological or medical) treatment (7), in which work-focused treatment seems more effective than general treatment (17, 18). Subsequently, there has been a shift over the last years in the literature from the individual (medical or psychological) treatment of CMHP, towards the integration of interventions in the workplace (16, 19, 20). Despite a growing body of evidence, practice shows that it is challenging to intervene effectively in the workplace where practical guidelines or strategies are scarce (20-23). Interestingly, according to employees with CMHP, strategies to keep working concern their coping with situations especially in the direct work environment, by attempting to retain a sense of autonomy and by getting the possibility to maneuver and perform in their working life (3). What in the workplace really enables employees to stay at work lies in the complexity of how individual factors and work-related factors interact, that is underexposed in the current research agenda. Understandably, factors on for example

communication between employee and employer, are often less tangible factors and therefore harder to capture (24). To unravel the dynamic and complex nature of phenomena such as stay at work, novel mixed methods research designs are needed (25).

There is no uniform definition of stay at work (SAW) (14, 24). Stay at work while facing mental health issues may be confused with presenteeism, that could be defined in the two following ways: 1) as 'employees, despite complaints and ill health that should prompt rest and absence from work, still turning up at their jobs' or 2) as 'a reduced performance at work, besides illness' (26). For both, if not handled appropriately, it may lead to absenteeism. We define SAW as a positive work outcome that is to continue working, indicated as no absenteeism or not being absent for more than 50% or no longer than 6 weeks (16). Working while facing mental health issues can be used as a means to decrease the severity of CMHP, resulting in an increased chance to stay at work (7). Common mental disorders refer to depression, anxiety disorder, or stress-related disorder (27, 28). However, a large number of employees who suffer from common mental health problems are undiagnosed and do not receive treatment (29). We also consider this group of employees at risk of negative work outcomes, as a consequence of psychological complaints. Therefore, we use a relatively broad definition of employees with diagnosed mood, anxiety or stress-related problems as well as self-reported psychological complaints.

In order to gain more insight into perceived factors that promote stay at work among employees with CMHP, we investigated the perspectives of the key workplace stakeholders in the process of stay at work: employees, supervisors and occupational health professionals.

## **2. Material and methods**

### **2.1. Study design**

This study uses a concept mapping approach. Concept mapping is a structured conceptualization method, designed to organize and represent perspectives regarding one theme of interest (30). It combines information from qualitative data collection and group discussions with multivariate statistical analyses, that, as a mixed methods approach, may be more suitable to capture the complexity of SAW (25, 27). Concept mapping facilitates a group of individuals to describe their views and represent these visually into a map of clustered factors (31). Since a diverse group of participants is recommended (30, 32), we explored promoting factors from various perspectives by including three key workplace stakeholder groups. Because SAW among employees with CMHP is also a precarious process, in which stakeholders may have different and possibly conflicting interests, we decided to let participants follow the concept mapping steps among peers. This enabled each stakeholder group to collectively represent their perspective regarding the same theme of interest, assuring the generation of valid and reliable results of similarities and differences by facilitating an egalitarian participation of each group (33).

## **2.2. Participants**

### *2.2.1. Selection of participants*

Participants were purposefully sampled from the three key stakeholder groups involved in the SAW process, leading to a convenience sample (30). We recruited employees through various strategies, by placing an announcement on the website or in the waiting room of various mental health services (n=4) and activism organizations representing people with CMHP<sup>1</sup>(n=7) , by posting an announcement on social media (n=3) and by distributing flyers at regional employers (n=4). We recruited supervisors by 1) contacting the regional largest employers, 2) placing an announcement on the website of the association representing middle and small-sized employers and the national employer's association<sup>2</sup> , and 3) posting a short recruitment video on social media. Lastly, we recruited occupational health professionals (OHPs) by posting an announcement on social media and on the website of the national association of labor experts<sup>3</sup> and large occupational health service practices.

Employees were included based on self-reported CMHP and their current work status (working at least 50% of their contract and thus currently working). Supervisors were included in this study if they are currently working as a direct supervisor and dealt with at least one employee with self-reported CMHP who stayed at work instead of being sick listed. Supervisors and employees were not working at the same organization. As this study is part of a larger (PhD)project to advance labor expertise in prevention of long-term absenteeism, we involved OHPs who are trained as so called "labor experts" in the Dutch social security system. Labor experts play a key role in supporting the reintegration process of persons with a work disability and remaining work ability. These OHPs are expert in the assessment and interventions needed in return to work process, matching the employee's capacities with work and work environment. In current practice in the Netherlands, the role of labor experts focuses mainly on work reintegration. Recently, the center of labor expertise<sup>3</sup> aims to explore the rather new role of these labor experts in prevention. Therefore, we included two groups among OHPs: one group with labor experts only and one group with a mix of OHPs, namely occupational health physicians, occupational health social workers, labor experts and organizational health advisors. Because this last group proved to have more practical experience with employees with CMHP while staying at work instead of being sick listed, we present results of the mixed group of OHPs in this paper.

### *2.2.2. Participant characteristics*

A total of 49 participants took part of this study, of whom 18 employees with CMHP, 17 supervisors and 14 OHPs, referring to table 1. Most employees with CMHP were highly educated and they were all native Dutch. Most of the supervisors and employees worked in the public sector (healthcare, education, civil services) as well as all OHPs and the type of employees were mostly professionals

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<sup>1</sup> Mensen met mogelijkheden, MIND en Samen sterk zonder stigma

<sup>2</sup> MKB Midden Nederland, AWVN

<sup>3</sup> Center for Labor Expertise, Nijkerk, The Netherlands

(e.g. engineer, accountant, system analyst, doctor, nurse, teacher). Employees with CMHP reported to experience mostly stress-related complaints, followed by mood disorders and anxiety.

Table 1. Participant characteristics.

Characteristic	Employees (n=18)	Supervisors (n=17)	OHPs (n=14)
Age (M)	29-61 (42)	31-62 (48)	46-67 (52,9)
Female (%)	67	56	50
Educational level Medium	2	0	0
Educational level High	16	17	14
Years of work experience (M)	n/a	1-20 (7)	4-35 (15)
type of CMHP-related complaints, self-reported	Stress: 15 Mood/depression: 11 Anxiety: 7 More than one: 11	n/a	n/a
Employee type (Hilton et al., 2008)	Executive, administrator or senior manager: 2 Professional (e.g. engineer, accountant, system analyst, doctor, nurse, teacher): 10 Technical support: 1 Sales: 1 Clerical / administrative support: 2 Service occupation: 2		
Sector	Public sector: 14 education (5), healthcare (3), civil services (6) Private sector: 4	Public sector: 14 education (2), healthcare (5), police (4), municipality (3) Private sector: 3	All in public sector

### 2.3. Data collection and analysis

The process of data collection and analysis contained of the following five-steps that were undertaken for each stakeholder group. Data were collected in 2019.

#### 2.3.1. Step 1: Focus question

The first step consisted of the formulation of a focus question to obtain ideas about the topic of interest (31). Our focus question was "What employees with CMHP need to enable them to continue working is...". The comprehensiveness of the focus question (step 1), the interviewing of participants to generate statements (step 2) and the feasibility of the online assignment (step 3) were pilot tested among a random group of OHPs and among colleagues of the researchers.

#### 2.3.2. Step 2: Generation of statements



Individual interviews to generate statements (short phrases or sentences reflecting ideas about the topic of interest) were conducted with each participant (31). Each interview was conducted either face to face or by telephone and took approximately 30 minutes. The interviews were executed by one researcher (SH), and the first two interviews for each group were reviewed by a second researcher (BC). Each participant was first given a 'warm-up-question' to ensure the focus on the phase of 'staying at work' instead of being sick listed, and the target population (employees with CMHP). After this, participants were encouraged to brainstorm and mention as many ideas as possible. The interviewer asked questions related to why and how, in order to concretize the statements on promoting factors to SAW. Each interview was audiotaped and transcribed. Thereafter, one researcher (SH) extracted all statements from each transcript. Statements with similar meanings of the content were merged. The process of extraction and merging of statements was checked by a second researcher (BC) and a third researcher (SO). Saturation occurred in the last interviews of each stakeholder group, that is the main criterion for the number of participants in this step of statement generation (31). Most participants were involved in this step (employees: n=17, supervisors: n=16, OHPs: n=13, respectively). Three participants cancelled the interview due to time constraints, yet they participated in the other steps.

### 2.3.3. Step 3: Prioritization and clustering

For each stakeholder group one researcher (SH) inserted all statements into the statistical program ARIADNE, a web driven tool specifically designed to support prioritization and clustering in step 3 and statistical analysis in step 4 (34). First, each participant was asked to prioritize each statement by using a 5-point Likert scale of 1 (lowest importance) to 5 (highest importance), distributing all statements equally among the five scales. Second, each participant was asked to cluster the statements with similar content, using at least 2 – but no more than 10 clusters. In total, all but one participant completed this step (employees: n=18, supervisors: n=17, OHPs: n=13, respectively).

### 2.3.4. Step 4: Statistical analysis

The statistical program Ariadne was used for the data analyses (34). First, the arithmetic mean score assigned to each statement was calculated among participants from each stakeholder group, resulting in a mean importance score of each statement. Second, a multidimensional scaling followed by hierarchical cluster analyses was used on the basis of a matrix of the clustering results (i.e. how often two statements were placed together in the same cluster by participants). This resulted into a two-dimensional visual map for each stakeholder group with a final set of clusters (32).

### 2.3.5. Step 5: Interpretation of the concept maps

Two researchers (SH and BC) independently determined the number of clusters for each concept map and discussed if more or less clusters represented participant's statements better, by evaluating the relatedness between statements in each cluster. For every stakeholder group, a two-hour focus group session, facilitated by two researchers (SH and BC) was held to interpret their concept map. By critically reviewing the statements covering the clusters, participants named and refined each cluster,

in order to represent its content. Through group discussion, some statements were moved to another cluster or clusters were removed, until consensus was reached. Each stakeholder group concluded their reflection with the identification of meta-clusters, and its practical implications. The researchers ultimately selected meta-clusters that the different stakeholder groups had in common through thematic analysis. Because each stakeholder group created their own map, importance scores across all clusters could not be evaluated. 40 out of 49 participants who carried out the prioritization and clustering task participated also in the focus group discussions (employees: n=13, supervisors: n=16, OHPs: n=11, respectively).

### **3. Results**

We first present each stakeholders' concept map by showing the retrieved clusters and most important statements of promoting factors to SAW. Then, we present five meta-clusters based on the clusters that stakeholder groups have in common. Lastly, we present the differences between stakeholder perspectives, retrieved through the concept maps and focus group discussions.

#### ***3.1. Concept maps per stakeholder group***

An overview of the generated clusters per stakeholder group is depicted in figures 1, 2 and 3. Each box on the figure visualizes the statements that were placed close to each other, reflecting a cluster. Clusters that are closer together generally have similar concepts. The more distal a cluster is placed on the horizontal or vertical dimension; the more consistency was given to this by the group, referring to a common concept that differs from the other clusters. The mean importance score of each cluster was also calculated. The thicker the line around the cluster, the higher mean importance score was given to it. The five statements that were scored as most important as promoting factors to SAW by each group are presented in this paper, referring to table 2. A full overview of statements is written out in the supplementary file ([link](#)).

Table 2. The five most important statements and mean importance score ( $\bar{n}$ ) per stakeholder group.

<b>Employees</b>	<b><math>\bar{n}</math></b>	<b>Supervisors</b>	<b><math>\bar{n}</math></b>	<b>OHPs</b>	<b><math>\bar{n}</math></b>
11. Employee is appreciated and seen as valuable by others in the workplace (Cl.1.5)	4,17	43. Teams work in an open and safe climate where there is no judging (Cl.2.7)	4,41	37. Job accommodations and autonomy are used to enable employee to stay in work (Cl.3.2)	4,31
17. Employee feels they have the freedom to set boundaries, for whatever reasons (Cl.1.1)	4,06	6. Supervisor has a people-oriented management style (approachable, accessible, sincere and transparent) (Cl.2.3)	4,41	10. Receiving support from colleagues (Cl.3.1)	4,23
18. Employee feels they have a healthy workload: has enough to do but no continuous work pressure (Cl.1.2)	3,89	24. Supervisor listens and reflects well with employee about what they observe in the employee's behavior (Cl.2.3)	4,18	39. Supervisor and employee keep in touch, in the case of reduced work performance or reduced attendance at work (Cl.3.2)	4,15
36. Supervisor offers safety, understanding, a listening ear, avoids judgements and contributes ideas without imposing a solution (Cl.1.4)	3,82	35. Employee is happy in their job and is motivated (Cl.2.2)	4,06	9. Employer creates safe working climate where mental health can be discussed (Cl.3.3)	4,00
48. Supervisor asks what the employee needs, and follows through on agreements about those needs (Cl.1.4)	3,78	16. Supervisor takes symptoms seriously by taking immediate action through conversations and referral (Cl.2.3)	4,00	51. Supervisor makes clear work agreements with employee about expectations, tasks and job accommodations (Cl.3.4)	3,92

The group of employees with CMHP produced 57 statements that resulted into nine clusters, with arithmetic mean scores of importance ranging from 2.49 to 3.61, referring to figure 1. The group of supervisors produced 51 statements, that were sorted into 10 clusters, with arithmetic mean scores of clusters' importance ranging from 1.82 to 3.43, referring to figure 2. Occupational health professionals produced 60 statements, that were sorted into nine clusters, with arithmetic mean scores of clusters ranging from 2.31 to 3.96, referring to figure 3.

Figure 1. Concept map on factors promoting Stay at work, representing the perspective of employees with CMHP.

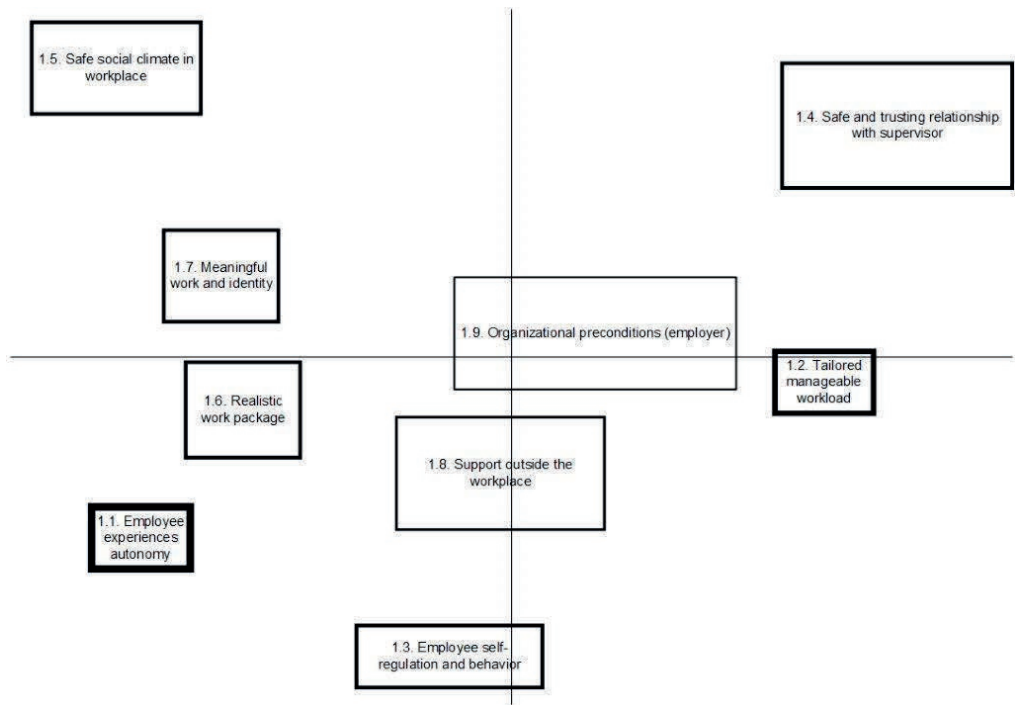


Figure 2. Concept map on factors promoting Stay at work, representing the perspective of supervisors.

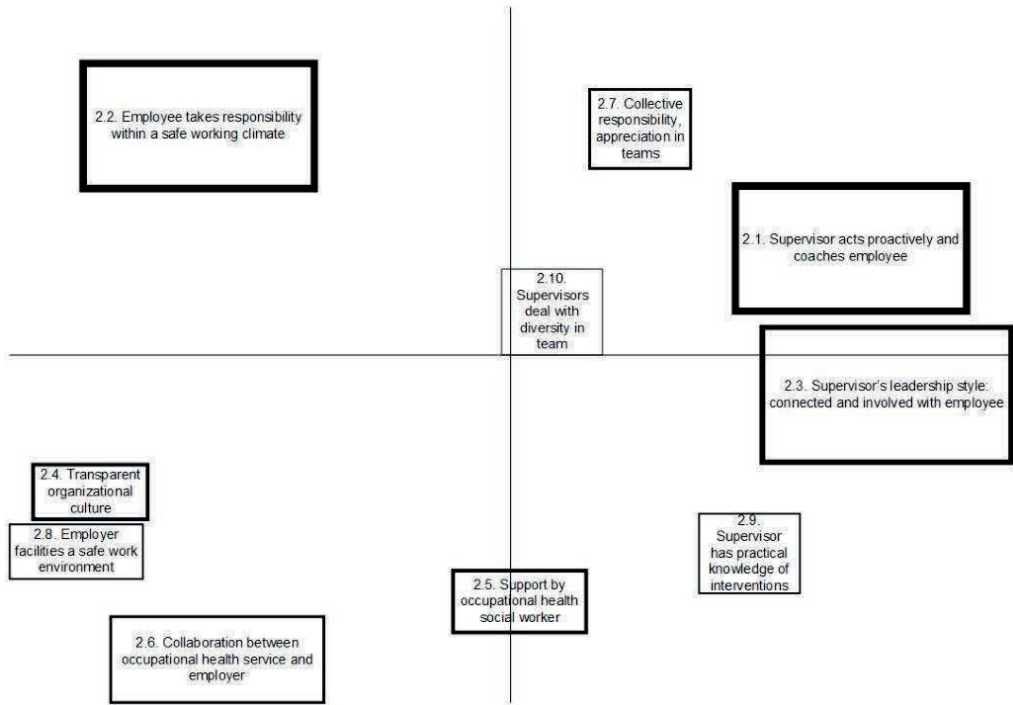
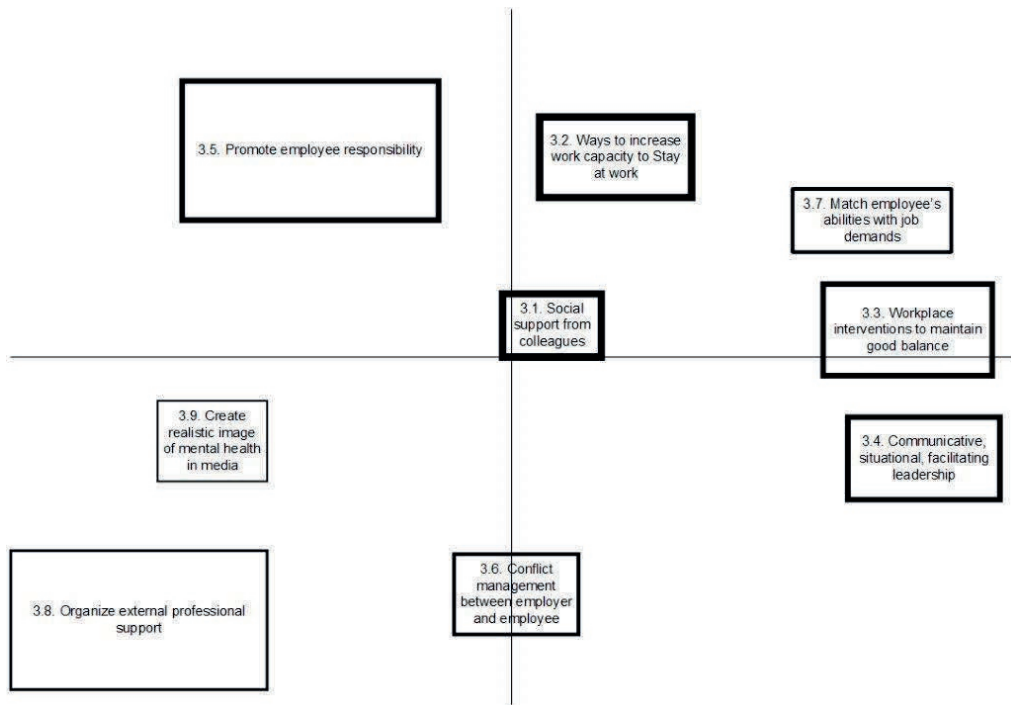


Figure 3. concept map on factors promoting Stay at work, representing the perspective of occupational health professionals (OHPs).



### 3.2. Meta-clusters and clusters

#### 3.2.1. Meta-cluster A: Employee's experience of autonomy in work

Meta-cluster A contains five clusters reflecting the employee's experience of autonomy in work, referring to table 3. Employees created three clusters, the first comprising statements about the employee's experience of autonomy (Cl.1.1) and the second regarding the employee's self-regulation and behavior (Cl.1.3). For example, employees who are affected by CMHP in their work value a sense of freedom to exert control over their own tasks, (physical) work environment or working hours. The third cluster refers to the experience of meaningful work and identity (Cl.1.7). Supervisors identified one, yet highly important cluster reflecting the employee taking responsibility to address issues and find solutions, within a safe working climate (Cl.2.2). OHPs stressed on one similar cluster, regarding the importance of the employee's sense of responsibility to maintain or increase work participation (Cl.3.5).

Table 3. Clusters of statements, sorted per meta-cluster (generated per stakeholder group and given mean importance score per cluster).

Meta-cluster and clusters (EM = employee, SV = supervisor, OPH = occupational health professional)	$\bar{n}$ (mean importance)
<b>Meta-cluster A: Employee's experience of autonomy in work</b>	
1.1 Employee experiences autonomy (EM)	3,61
1.3 Employee self-regulation and behavior (EM)	3,46
2.2 Employee takes responsibility within a safe working climate (SV)	3,37
3.5 Promote sense of responsibility of employee (OHP)	3,06
1.7 Meaningful work and identity (EM)	2,97
<b>Meta-cluster B: Supervisor support</b>	
2.1 Supervisor acts proactively, and coaches employee (SV)	3,43
2.3 Supervisor's leadership style, connected and involved with employee (SV)	3,17
3.4 Communicative, situational, facilitating leadership (OHP)	3,1
1.4 Safe and trusting relationship with supervisor (EM)	3,07
<b>Meta-cluster C: Ways to match work to individual capacity and needs</b>	
3.2 Ways to increase capacity to SAW (OHP)	3,54
1.2 Tailored and manageable workload (EM)	3,31
1.6 Realistic work package (EM)	2,98
3.7 Match employee's abilities with job demands (OHP)	2,94
2.9 Supervisor has practical knowledge of interventions (SV)	2,53
<b>Meta-cluster D: Safe social climate in workplace</b>	
3.1 Social support from colleagues (OHP)	3,96
3.3 Workplace interventions to maintain good balance (OHP)	3,26
1.5 Socially safe climate in workplace (EM)	3,03
2.4 Transparent organizational culture (SV)	3,00
2.7 Collective responsibility and appreciation in teams (SV)	2,71
2.8 Employer facilitates a safe work environment (SV)	2,55
3.9. Create realistic image of mental health in media (OHP)	2,31
2.10 Supervisors deal with diversity in team (SV)	1,82
<b>Meta-cluster E: Professional and organizational support</b>	
2.5 Support by occupational health social worker (SV)	2,94
1.8 Support outside the workplace (EM)	2,84
2.6 Collaboration between occupational health service and employer (SV)	2,74
3.8 Organize external professional support (OHP)	2,60
1.9 Organizational preconditions (employer) (EM)	2,49
3.6 Conflict management between employer and employee (OHP)	2,27

### 3.2.2. Meta-cluster B: Supervisor support

Meta-cluster B "supervisor support" contains four clusters, which all pertain to the supportive role of and relationship with the supervisor, referring to table 3. Employees formed one cluster, emphasizing on a safe and trustful relationship with the supervisor (cl.1.4), comprising statements such as the supervisor offers a listening ear, avoids judgements and asks what the employee needs in order to continue working. Two clusters represent the supervisors' perspective, in which the first cluster concerns the supervisor's ability to act proactively and coach the employee with CMHP (Cl.2.1). The second cluster is about the supervisors' leadership style, in which the supervisor shows an involved and connected attitude towards the employee, by taking signals seriously and by listening and reflecting well with employee about what they observe in the employee's behavior (Cl.2.3). In line with the supervisors, OHPs identified one cluster regarding the role of the supervisor, regarding the use a communicative, situational, facilitating leadership style (cl.3.4).

### *3.2.3. Meta-cluster C: Ways to match work to the employee's capacity and needs*

Meta-cluster C reflects ways and interventions to match the work or work environment to the employee's capacities and needs during the time that employees struggle with mental health problems in their work. Employees considered a tailored and manageable workload (cl1.2) as highly important as well as a realistic work package that is genuine and workable (cl.1.6). Supervisors emphasized that having practical knowledge about ways to intervene (cl.2.9) helps to promote SAW among employees with CMHP. Also, according to OHPs two clusters of statements were created, one comprising ways to increase the employee's work capacity to SAW (Cl.3.2). the other cluster is about matching employee's abilities with job demands (cl.3.7), ideally through consultation of the OHP on the use of job accommodations and autonomy.

### *3.2.4. Meta-cluster D: Safe social climate in workplace*

Meta-cluster D "safe social climate in workplace" contains eight clusters, referring to table 3. According to employees with CMHP, one cluster (cl.1.5) reflected the importance of a socially safe climate, containing statements about how employees can be appreciated and valued in their contributions to the work, and about open culture at the workplace. From the supervisors' perspective, a transparent organizational culture was mentioned to be important (cl.2.4). Besides, two clusters refer to the collective responsibility and appreciation in teams (cl.2.7), and facilities offered by the employer for a safe work environment (cl.2.8). More central on the map (and therefore having less consensus among the group) supervisors named their ability to deal with diversity in teams (cl.2.10). OHPs emphasized on the social support from colleagues (cl.3.1), as well as workplace interventions to maintain a good balance for the employee (cl.3.3), such as creating an open culture to discuss mental health and crafting jobs in such a way that there is a variety in tasks. Lastly and with less consensus in the map, OHPs mention the creation of a more realistic image of mental health in the media to reduce stigma and prejudices (Cl.3.9).

### *3.2.5. Meta-cluster E: Professional and organizational support*

In meta-cluster E, six clusters were identified, with two clusters from each stakeholder group. Employees produced one cluster representing organizational preconditions from the employer (Cl.1.9) and another cluster referred to the provision of professional support outside of the workplace (Cl.1.8). Supervisors stressed the importance of collaboration between occupational health service and employers (Cl.2.6), e.g. a shared vision on SAW and absenteeism and collaboration to select interventions in a particular case. Another cluster refers to the importance of support from an occupational health social worker or peer mentor, who are employees with lived experience of CMHP (Cl.2.5). OHPs present clusters, reflecting the organization of external professional support (Cl.3.8), and their own support offered on conflict management between employer and employee (Cl.3.6).



### **3.3. Differences between stakeholders' perspectives.**

The researchers compared the retrieved clusters and statements between the perspectives of employees, supervisors and occupational health professionals, through thematic analysis. Differences were given mainly in the prioritization task, the responsibility of employee and formulation by stakeholders. Employees rated statements within meta-cluster A (employee's role) as important, followed by a safe social climate at the workplace (meta-cluster D) and a trustful relationship with their supervisor (meta-cluster B). Supervisors mostly emphasize the employee's role (meta-cluster A) as well as their own role (meta-cluster B), showing a joined responsibility of both employer and employee to promote SAW. Supervisors acknowledged the importance in their own role to support employees who face difficulties at work due to CMHP. OHPs rated the psychosocial working climate (meta-cluster D) and ways to match employee's capacity to the work (meta-cluster C) as highly important. Interestingly, none of the stakeholder groups found clusters about professional and organizational support (meta-cluster E) most important relatively to the other clusters, however it was mentioned by every group through various statements.

Differences were also found through thematic analyses in the interpretations between stakeholders towards the responsibility of the employee. Employees value a sense of freedom to exert control over their own tasks, (physical) work environment or working hours. They stress the importance of being given control and responsibility within their work, especially when employees are struggling at work due to mental health problems. Supervisors on the other hand stress the employee's sense of responsibility to address their issues, especially when mental health problems have an impact on their work. Also, towards the importance of workload differences existed. Employees explicitly state a manageable workload and realistic working package on team- and organizational level as promoting factors to SAW, while OHPs and supervisors emphasize on adjustments to the individual's work capacity that may be reduced due to CMHP, through the offer of individual interventions or job accommodations (e.g. the reduction of tasks or responsibilities). Finally, yet importantly, only OHPs mentioned the importance of collegial, practical support, while supervisors and employees named more in general a safe working climate, with collective responsibilities and appreciation in teams.

## **4. Discussion**

This study represents a conceptualization on how to promote SAW for employees with CMHP from a multiple stakeholder perspective. Five meta-clusters were identified based on clusters and statements perceived by medium and high-educated Dutch employees with CMHP, supervisors and occupational health professionals. The high number and wide variety of statements confirm the dynamic and complex nature of staying at work with CMHP. Despite the different roles that stakeholders have in the workplace, perspectives on promoting factors to SAW overlapped strongly between them. However, differences were found between stakeholder-groups on the rated importance to these shared ideas. Our findings emphasize on a joined responsibility of employee and employer. The employee takes responsibility and autonomy when being treated respectfully for their expertise of their own situation and ideas to stay at work. Our study reveals the significant role and responsibility

the employer plays, in which workplace stakeholders such as managers have a direct impact on wellbeing of employees and organizational systems that create socially safe workplaces.

First, the presented conceptualization provides novel insights into the relative importance of previously reported, supporting factors from a multiple–stakeholder perspective. These factors act on both individual level, such as personal resources and treatment, reflected in meta-cluster A and E, respectively), and organizational level, such as job demands, job control, co-worker support, supervisor support, job security, reflected in meta-cluster B and C, respectively). This prioritization shows that the main focus should be given to the employee’s experience of work, by addressing one’s qualities, capacities and needs resulting in the preservation of one’s sense of autonomy and responsibility in work, especially when struggling at work due to CMHP (13). Also, it is crucial to focus on the balance experienced in one’s work, besides the focus on recovery of mental health complaints. Therefore, work should be matched to the employee’s capacity and needs through (timely and temporarily) work- or workplace accommodations, as suggested by the literature in other health conditions also (12, 35, 36). These work- or workplace accommodations could differ per situation, for example in case of the COVID-19-pandemic that led to the restriction to work from home. Employees facing mental health issues could be exempted and allowed to work from their workplace office. Each meta-cluster has its own function and cannot act without the others. Meta-cluster A and B reflect the direct interaction between employee and employer, while the other meta-clusters act as conditions to promote SAW. To offer tailored and successful support, it is important to assess the interaction of these meta-clusters, caused by the vast complexity of promoting SAW.

Second, our study revealed that the sense of autonomy in work is highly valued by employees who struggle at work due to CMHP. This is reflected by “being heard or being asked about needs” (autonomy, exerting control) and “being enabled to continue working’ (employer facilitates)., theorized by the Capability-for-work model (7, 37). Interestingly, the literature shows that most interventions aim to strengthen personal- and work factors such as coping style, severity of complaints or job demands, rather than autonomy in work or freedom of choice to SAW (7). Studies on other (chronic) health conditions also report self-control, autonomy and freedom of choice as motivators and success factors to SAW (13, 14). That autonomy might be more challenging to stimulate among employees with CMHP, may be because lack of control is a common manifestation of CMHP (38). Due to stigma (5) or lack of skills (4), supervisors and occupational health professionals easily tend to take over control, while our study shows the importance of experiencing a sense of autonomy in the SAW process. We recommend occupational health professionals and supervisors to stimulate the autonomy of employees and to address their capacities, by 1) encouraging active participation, 2) asking the right questions, 3) listening to their needs and 3) supporting SAW as much as possible in order to prevent negative work outcomes. In line with the Self-Determination theory, we underscore that autonomy is one of the psychological needs that facilitates motivation, for any human being and also in the life domain of work (39). As jobs of medium- and high educated employees may seem more flexible in terms of workplace accommodations and given autonomy in the job, to stimulate autonomy may seem more applicable for those employees. However, a similar study conducted by our research group among employees with common mental health disorders and low socioeconomic

status (SES) showed that potential facilitators to stay at work were: self-awareness, job control regarding work content and working conditions, and a supportive manager (40). We argue that the organizational systems need to make more effort to facilitate autonomy, in every type of employee or type of job.

Considering the plethora of factors promoting SAW, a recent realist review study showed, based on the Capability-for-work model, how both work-related resources and personal resources, such as cultural background, health status, and coping contribute to positive work outcomes (7). Work outcomes, such as staying at work and work performance can be realized by the way employees are able or enabled by their workplace to convert these resources into tangible work capabilities such as (i) having meaningful relations at work and exerting control over one's work (7). Interestingly, our study showed mostly work-related factors and factor about matching personal life to working life promote SAW. This may suggest that personal factors such as severity of symptoms and previous life experiences may not relate to this work outcome, while previous research has shown they do. In addition, we asked for promoting, enabling factors to stay at work and this may leave out hindering factors, formulated as barriers, such as bullying. (Nielsen et al. 2016, Van Hees et al, 2021b). Although this study is one piece of the puzzle, it stresses the importance of workplace-related factors such as support from the supervisor and a safe social climate. Moreover, these are factors that are rather tangible and changeable by workplace stakeholders, given their own practical strategies reflected by the statements in this study. Those may inform employers on how to uptake their responsibility and commitment so their organization can support employees with mental health problems to thrive.

Next, our study shows novel insights on the importance of the interaction between employee and employer, in which the process of SAW takes place. Supervisor support, based on a trustful relationship of communication, is perceived as highly important, besides professional and organizational support that needs to be arranged by the employer (41). This interaction should occur in a psychosocial safety climate, to promote SAW. This supportive interaction has been found in previous studies to lead to better mental health and positive work outcomes (42, 43). Mechanisms and conditions on the interpersonal level deem to be an important addition resulting from this study. From the realist research paradigm, these refer to the relationships between individuals and groups that influence interpretation, reasonings and use of (workplace) resources in social dynamics (24, 44). Therefore, we propose to add interpersonal dynamics as an additional level besides factors on the individual and organizational level (45). Consequently, supervisors and occupational health professionals should address and evaluate the employee's experience of mechanisms on the interpersonal level, such as perceived support, value and respect, trust, and safety (7, 28, 46, 47).

As clearly stated by all stakeholders in our study, the employer plays a crucial role in enabling employees with CMHP to continue working; endorsing a shared responsibility of all stakeholders (13). On a distal layer at the work floor, efforts by supervisors do not only reflect technical, rather practical skills, such as offering time for individual treatment or reducing job demands or working hours (35). Efforts comprise more 'soft' skills by supervisors, in which our participants stated specific strategies to support proactively yet empathically. These statements could contribute to practical guidelines for

supervisors on increasing awareness, skills on matching work towards employees needs and abilities, offered through training by occupational health professionals. On a proximal layer, more interventions, initiated and implemented by organizations and senior managers, are needed to increase mental health literacy (6, 47). For example, through positive psychology in organizations (48). A multi-layered strategy may cultivate a culture of support and influence successful implementation (22). This is necessary to address the unique context of the work environment that can act as a facilitator to continue working, rather than a barrier (6).

By giving voice to employees with CMHP, we noticed that a lot can be learned from these employees who succeeded to SAW (25). Most participants had gone through the stages of struggling at work, being on sick leave, returning to work and managing to SAW, possibly making them more efficacious and positive about their ability to work (49). During the group discussions, participants reported that they felt the importance to improve the employer's capacity to support employees with CMHP. We underline this and encouraged participants to interact with colleagues and supervisors about their experiences in their workplaces to fight stigma about mental health in the workplace. Besides, we will use participative processes to develop and evaluate practical guidelines to enhance the capacity of employers in supporting employees with CMHP to continue working (41, 48).

#### ***4.1. Strengths and limitations***

A strength of this study is that each stakeholder group formulated promoting factors from their own perspective, preventing possible conflicting roles interfering the given statements. This turned out to be particularly useful during the focus groups discussions, where participants could freely reflect and deepen the discussion to refine clusters. In addition, the anonymous scoring of the relative importance of perceived factors supports employers to gain insight into what is found to be most important to act upon. By repeating this procedure in various groups and therefore robustly matching the various stakeholders involved in the workplace, we worked towards a more fully saturated picture, increasing external validity (32).

There are some limitations to this study. First, the study sample consisted of participants with a medium and high educational background, missing out on participants with a low educational background. This may seem comprehensible for supervisors and OHPs, however not for employees with CMHP. An explanation could be that we did not use words that resonate with those employees (e.g. not being fit, not recharged after holiday, continuously feeling low). In response to this limitation, we conducted another study, with additional effort to recruit participants with a lower education background in which we used a different, less linguistic, method to collect data (Vossen et al. 2021). Additional attention is needed in research for minority groups such as migrants or refugees in the work force, who face mental health problems as well as other vulnerabilities, in order to reduce health and workplace inequalities (40, 50). Second, it was hard to include employees who were struggling with CMHP, yet staying at work for the first time. This could be due to privacy reasons or due to the unawareness of signals referring to CMHP. Nevertheless, most participating employees with CMHP had extensive experience and were able to translate these experiences to concrete statements, this may be due to the fact that from the various recruitment strategies, most employees were recruited

through the route of the activism organizations representing people with CMHP. Third, although we included multiple workplace stakeholders, we did not include colleagues of employees with CMHP, who also play a significant supportive role (51).

Based on the abovementioned insights, we suggest to address the following in future research: 1) explore the perspectives of colleagues working with employees with CMHP, 2) explore mechanisms on employee's work capabilities and (freedom of) choice to SAW, and 3) investigate the relationship between leadership and the prevention of negative work outcomes in employees with CMHP.

## **5. Conclusions**

This study offers a conceptualization of SAW, in which multiple workplace stakeholders (Dutch employees with CMHP with medium- and high educational backgrounds, supervisors and occupational health professionals) present similar promoting factors to stay at work for employees with CMHP. In addition to organizational- and individual efforts, more attention is needed towards the interpersonal dynamics between employer and employee, reflected by tailored work, enhancing autonomy, the employer's responsibility, and professional support. Above all, a safe and trustful work environment, in which employee's autonomy, needs and capacities are addressed by the supervisor, forms a fundamental base to SAW. Our study fills an important gap between theory and practice by presenting strategies and its relative importance for different stakeholders to effectively promote SAW. Results from our study provide practical implications for developing and evaluating such interventions for employers. Because the nature of staying at work is a multifactorial and dynamic process, we suggest that including employees with CMHP and their supervisors is key to planning, evaluation and implementation of workplace interventions.

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## Chapter 5

### Strengthening supervisor support for employees with common mental health problems: developing a workplace intervention using intervention mapping

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## **Abstract**

**Background:** This study presents the development of a workplace intervention to strengthen supervisor's support for employees with common mental health problems (CMHP). CMHP have been increasing over the last years, resulting into negative work outcomes, such as absenteeism or reduced work performance. To date, organisational interventions have been promising in preventing these negative work outcomes, however it is yet unknown in what way the role of workplace stakeholders, in particular supervisors, can be strengthened. This study contributes to the literature of interventions on an organizational level which uses a preventative approach by promoting stay at work among employees with CMHP through supervisor support.

**Methods:** we applied the intervention mapping (IM) approach, by actively involving workplace stakeholders (employees with CMHP, supervisors and occupational health professionals) through the development process and the use of Integrated model of behaviour prediction for employers. All six steps of IM are followed and thematic analysis was used to analyse interviews and focus groups.

**Results:** Based on a comprehensive needs assessment, the intervention resulted in an online guideline, with five step-wise themes on how to support employees with CMHP to stay at work (SAW). The guideline addressed the most important and changeable actions using the Integrated model of behaviour prediction. The guideline presents how to signal and address problems in the workplace and find solutions by stimulating autonomy of employees, explore job accommodations and ask for occupational support. In addition, basic conditions on how to create mentally healthy workplaces were presented. Coaching sessions by occupational health professionals, that include practical strategies using the best available evidence, were identified by the stakeholders.

**Conclusions:** This SAW-Supervisor Guideline-intervention responds to the need of supervisors to be supported in their role, responsibility and ways to support employees with mental health issues, through a behaviour-oriented, preventative approach. Intervention mapping provided a systematic process to identify, structure and prioritize factors of supervisor support, resulting in a novel workplace intervention. The active involvement of workplace stakeholders throughout the process resulted into a well-received intervention. The theoretical framework provided practical ways to induce supportive behaviour of supervisors, bridging theory with practice.

## 1. Background

To a greater or a lesser extent, everyone has to deal with mental health issues in life. At any point in time, one-sixth of the working age population is suffering from common mental disorders (1, 2). Despite all efforts regarding preventative mental health interventions, the OECD and occupational health researchers call for more attention to employees with common mental health problems (CMHP) in the work context (1, 3, 4). Work is often considered as an important cause of CMHP, and at the same time an essential solution to enhance mental health, societal participation and general wellbeing of individuals. Staying at work (SAW) while facing mental health issues can be used as a means to decrease the severity of CMHP, resulting in prevention of negative work outcomes such as absenteeism or reduced work performance for employees with CMHP (5). Workplace stakeholders, especially supervisors, play a key role in prevention by supporting employees with CMHP, that may avoid employees with CMHP getting absent in the long term (6, 7). We define SAW as to continue working while maintaining work performance (5). Common mental disorders refer to depression, anxiety disorder, or stress-related disorder (8, 9). However, a large number of employees who suffer from common mental health problems are undiagnosed and do not receive treatment, or do not disclose their diagnosis at the workplace (3, 10). Therefore, we target a relatively broad group of employees with diagnosed mood, anxiety or stress-related problems as well as self-reported psychological complaints.

The literature in occupational health shows that high quality leadership predicted a reduced risk of long-term sickness absence (11) and contributes to return to work (12). Various studies show how low supervisor support is a risk factor for absenteeism (13-15) and how investing in supervisor support, e.g. to facilitate the dialogue between employee and the nearest supervisor by following a protocol, contributes to better return to work planning (16). Only a few studies show promising results that supervisor support enhances employees to stay at work because it is harder to know what worked in prevention of negative working outcomes, such as we aim in this study (5). However, a trustful relationship with the supervisor, with whom the employee can discuss needed support or job accommodations, is found to promote SAW (5). The increasing number of absenteeism and incapacity for work because of mental health problems over the last decades shows that it is challenging to intervene effectively in the phase of being at work, where practical guidelines for workplace stakeholders such as supervisors are scarce (17, 18). This is urgent, because it is often the supervisor, their line manager, who is the first person who needs to act when the employee struggles at work. This workplace stakeholder is often not trained on how to do so accordingly (19). In sum, research shows the important role that supervisors have in supporting these employees to SAW, however in case of CMHP they lack strategies or guidelines on how to support (19-21). To illustrate, 40% of a representative panel of Dutch employers reported not to know how to help employees with CMHP in the workplace (22). Therefore, there is a need to provide supervisors with clear directions on ways to promote SAW among employees with CMHP.

There are various reasons why the role of the supervisor in the phase of staying at work with CMHP is under addressed. First, although policies are into place on sustainable employment and promotion of health and wellbeing of employees, in practice, supervisors often act when the employee

is yet facing reduced performance or sickness absence (23). Second, signalling is hard because employees find it difficult to disclose mental health issues at the workplace, making it harder for supervisors to address mental health (24). Third, CMHP usually develop slowly and saliently. Altogether, talking about mental health at the workplace is frequently avoided by both employees and supervisors due to the stigma and fear for losing the job (25). In the Netherlands, due to privacy laws, supervisors are not allowed to ask or even know about the employee's medical condition. Altogether, it is complex for supervisors to effectively support and facilitate employees due to the lack of guidance on their role and ways to deal with mental health in the workplace. This study aims to develop such an intervention, to strengthen supervisor support for employees with CMHP, derived from research and practice.

Well-designed work and workplaces that promote SAW seem essential to prevent negative work outcomes (2). For this, effective, preventive workplace interventions are needed. Although organizational interventions have been shown promising in preventing mental health problems of employees (26, 27), it is yet unknown what the elements and effects of such interventions are on actual supervisors' supportive behaviour (7, 28). So far, preventive interventions that target supervisors' behaviour as a mechanism of change in employee health, well-being and work outcomes consist of elements such as a behaviour oriented approach (28, 29) and a participative problem solving approach (30). A supportive supervisor can open the door for employees with CMHP regarding their needs for organizational support, e.g. by offering job accommodations or time for treatment. Therefore, it would be valuable to investigate what in the behaviour of supervisors works or does not work to promote SAW for employees with CMHP. Because it is harder to investigate effects of what has not yet occurred, such as in prevention, (23), it is challenging to know for both employees and their supervisors what can be done in the workplace through a preventative approach (3). Relatively few studies are specifically investigating the role of supervisors in prevention, in order to support employees with CMHP to SAW. Therefore, we need to explore what happens in practice and use those learned lessons to develop interventions (21).

Previous studies targeted supervisor support to reduce negative work outcomes for various employee populations. One promising intervention was presented in a study targeting self-efficacy of supervisors based on the ASE model (31), aiming to reduce negative work outcomes. This study used strategies such as inter-collegial consultation (32). Other studies used different theoretical frameworks, two using the Self-determination theory (33, 34) and one using the trans-theoretical framework (35), offering more insights into the behavioural elements of workplace stakeholders. To create mentally healthy workplaces, we assume, as those studies, that it is necessary to target individual behaviour of various workplace stakeholders (2, 6, 36). In addition, we emphasize the importance of workplace factors on organisational level. In the previous intervention studies, it remained unclear how environmental factors, such as the learning climate or social safety were targeted or evaluated. Therefore, in the present study, we used the Integrated model of behaviour prediction to frame employer's behaviour that also incorporates environmental factors (37).

Besides, the use of a practical, participative approach to intervene is needed. A protocol providing insights and transparency based on theory and evidence may provide support on the

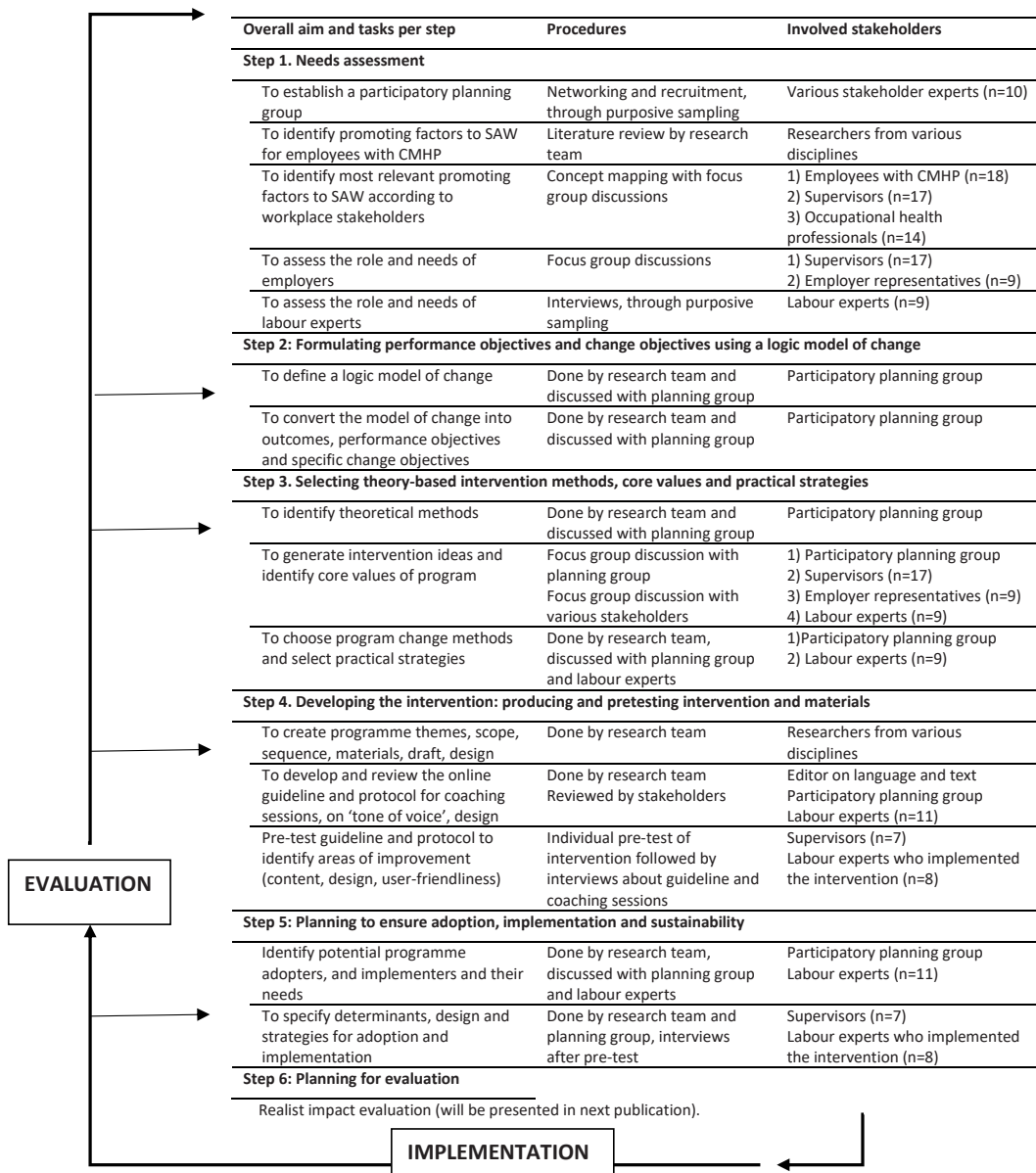
development of such an intervention. We searched a systematic approach, in which Intervention mapping (IM) (38) has been applied previously in workplace interventions. However, it was most often used to target behaviour on the individual level for specific working populations (33, 39, 40). Two studies applied IM on behaviour of workplace stakeholders such as supervisors (35) or occupational health physicians (34), however not on the promotion of Stay at work for employees with CMHP. This study aims to present the development of such an evidence-based workplace intervention. To meet the recommendations of recent reviews on the use of IM in workplace interventions (41, 42), we present how active stakeholder involvement, and the use of a theoretical framework were applied to bridge the gap between theory and practice.

## **2. Methods**

### **2.1. Procedures**

This paper describes the development of the Stay at Work-Supervisor Guideline (SAW-SG) intervention (Fig.1). This process was guided by the six steps of the IM approach for development, implementation and evaluation of health promotion interventions (38). IM consists of six consecutive steps: 1) needs assessment, 2) formulating outcomes and intervention objectives using a logic model of change, 3) selecting core values, methods and practical strategies, 4) developing the intervention, 5) planning for adoption and implementation, and 6) planning for evaluation. IM is a stepwise process, and each step is based on previous steps. This study has been approved by the Ethical Review Board of Tilburg University, The Netherlands (EC-2019-30 and RP281).

Figure 1. Intervention mapping process for development of the intervention.



Legend: Overview of each IM step: overarching aims(s), tasks, procedures and stakeholders involved in the development of the SAW-SG intervention. Figure based on Intervention Mapping as described by Bartholomew [38].



## **2.2. Selection of participants**

In each step several workplace stakeholders were involved: supervisors, employees with CMHP and occupational health professionals (OHP), see Fig. 1. In this study we involved OHPs who are trained as so called "labour experts" in the Dutch social security system. These professionals are expert in the assessment and interventions needed in return to work processes, matching the employee's capabilities with work and work environment. In order to include each workplace stakeholder group, purposive sampling was applied for recruiting participants. Purposive sampling allows for selection based on a sampling frame aiming to maintain rigor and identify based on specific study driven variables or characteristics (43, 44). For each stakeholder group, participants were selected with respect to gender, age, working experience (varying from 1 to over 25 years of supervisory experience), size of organization (including medium and small sized organizations) and various sectors. Thereby, all participants were recruited in various ways, through the researchers' network, promotion on websites of the national association for employers or labour experts and advocacy organizations representing people with CMHP, social media (LinkedIn) and existing expert groups. Participating OHPs were employed in various organisations (public and private) or self-employed and hired by organisations. Supervisors were working in sectors such as health care, IT, education, and civil services. Included supervisors reported to have dealt with employees facing CMHP at the moment or recently, based on their self-report. For the concept mapping study in step 1, we refer to the concept mapping study, regarding the selection of participants and data collection (31).

## **2.3. Data collection**

At the start of this study, a participatory planning group was established. The planning group consisted of occupational health professionals, representatives of employees with CMHP, representatives of the Dutch employers' association, supervisors and researchers. Meetings were held regularly (half-yearly) to collect information as well as report on the progress and output of the steps throughout the IM process. These meetings were drafted in a way that participants received output of steps on the intervention development or intermediate results and were asked, through group discussion, to reflect upon this. Also, we held brainstorm sessions on preparation of the next IM step.

In each step of the IM process we collected data with relevant stakeholders. In step 1, needs assessment, we used two data collection activities, one was a concept mapping study, published elsewhere to explore perspectives of employees with common mental health problems, supervisors and OHPs on factors that promote SAW and its relative importance. Clustering those statements and scoring the relative importance led to concept maps in which stakeholders had various clusters in common. In the other part, through focus group and interviews, we collected data regarding the needs (step 1) and the subsequent IM steps, getting information during live and online interactive sessions on the development of the intervention to strengthen supervisor support. Four focus groups and 17 interviews were held by using group discussion, brainstorm techniques such as mind map, individual interviews asking feedback on prepared materials such as the guideline and group reflection on the developed intervention materials. Discussed topics were about their needs, including

organizational needs, roles of workplace stakeholders, preferences regarding interventions to strengthen supervisor support, and regarding the particular characteristics of such a workplace intervention. All participants signed informed consent before participation. All of the focus groups and interviews during the IM study were audiotaped and transcribed verbatim. Thematic analysis was conducted by two researchers who independently coded relevant text fragments and labelled into categories (43). Thereafter the researchers compared themes, to synthesize the results into general recommendations. In case of disagreement, topics were discussed by the research team until consensus was reached. The study took place in 2019 (step 1), 2020 (step 2, 3 and 4) and 2021 (step 5 and 6).

### **3. Results**

#### **3.1. Step 1. Needs assessment**

##### *3.1.1. Literature review*

The literature review consisted of a realist synthesis that revealed what works to promote SAW among employees with CMHP, for whom, under what circumstances and how. The results of the review have been published elsewhere (5). In sum, the synthesis, including 61 studies, demonstrates how a safe organisational climate and social support, especially by the supervisor, enable employees with CMHP to stay at work. More specifically, a trustful relationship in which the supervisor shows openness to talk about mental health conditions in an open climate, contributes to stay at work. Adequate and timely social support, from colleagues but particularly supervisors who are willing to assist and listen to work-related problems, increase the chance to stay at work among employees with CMHP. It was supposed that employees with CMHP can realize to stay at work through the following set of capabilities: a) by having meaningful relations and social support at work, b) by exerting control, c) by evaluating and adjusting the workload, d) by experiencing freedom to create opportunities for active coping, e) by experiencing better health, increased cognitive functioning and work performance. Facilitation, by an OHP, who acts independently, with sympathy and pragmatism, who provides an expert insight and who is familiar with the work and the work environment, also improves the likelihood to stay at work.

The literature review showed that most interventions still intervene on the individual, employee-level. The synthesis found that if those interventions focus on multiple elements, for example addressing both personal factors (symptom reduction and coping with symptoms) and work factors (coping at the workplace or a better work-related health), this leads to an increased likelihood to stay at work. Also, combining different strategies in interventions seemed necessary to change behaviour, such as an online guideline combined with the dialogue with a professional and homework assignments (5). The results of this review were used to frame elements to promote SAW more thoroughly and provide content for the intervention.

### 3.1.2. *Concept mapping study with multiple workplace stakeholders*

For this study, workplace stakeholders (employees with CMHP [n=18], supervisors (n=17) and OHP (n=14) provided statements on the focus question “What an employee with mental health problems needs to stay at work is...”.

First, participants emphasized on the role and needs of the employee in this phase of being at work while facing mental health issues. Unambiguously, it is significant for employees with CMHP to experience a sense of autonomy and meaning in work, even when struggling at work. Especially in this phase, it deemed important to experience self-control in work and a sense of responsibility to address problems. Participants mentioned it is important for them to jointly consider solutions, in which both employee and employer take their responsibility to act and intervene.

Second, supervisor support, reflected by a trustful relationship and empathic communication, is perceived to be highly important because it enables employees to address problems. A pre-existing strong work relationship, that is based on trust, sincere interest, openness and transparency is crucial to adequately support employees who struggle at work, because it encourages employees to earlier disclose and converse about their mental health problems. In that last case, this dialogue between employee and supervisor is ideally held in a social safe work environment. Such an environment enables them to discuss the impact of problems in work and what the employee needs to stay at work, ideally with an involved supervisor who adheres a pro-active, open, listening and non-judgmental attitude.

This leads to the third point, that work should be matched to the employee's capabilities and needs through (timely and temporarily) work- or workplace accommodations. Also, professional and organizational support should be arranged by the employer. It was emphasized that the employee and supervisor should be in contact regularly, to assess and monitor the tailored job accommodations or interventions. Lastly, the occupational health service provider and the organization should set a clear goal, based on a shared vision on how to promote SAW and should collaborate to select tailored interventions in a particular case.

### 3.1.3. *Focus groups and interviews with supervisors and OHPs*

In addition to the above findings in which we investigated promoting factors to SAW for employees with CMHP, we also explored the needs of supervisors and OHPs on how to support employees to SAW through interviews and focus groups.

Table 1 summarizes the most important findings of the needs of supervisors in order to promote SAW, in random order. In sum, supervisors expressed that they need to be facilitated by their own organization in coaching or tools to gain knowledge. Also, they need skills on conversing about mental health and work. They especially lack knowhow on early signalling of mental health problems and information on what they can or cannot ask the employee. Besides, they express the need to know what interventions and job accommodations to offer and how to communicate about this accordingly, both towards the employee as towards the rest of the team. Having easy access to an OHP for consultation or being trained by them was given as a solution by supervisors.

Supervisors mentioned they prefer practical tips when being coached and a tailored approach during the intervention. Supervisors emphasized that such coaching could increase knowledge and positive attitudes towards diversity and mental health, needed to be reflected by all layers of their organization. They said to prefer easy access and strong collaboration by an expert in occupational health, also in this preventative phase. OHPs confirmed that in order to discuss ideas, share knowledge and increase skills of supervisors, they will need a guideline as a “conversation tool”, including a protocol on how to implement this intervention.

Table 1. Step 1: summary of needs assessment

<b>Focus group discussions</b>
<b>Supervisor needs to support Stay at work (SAW)</b>
- Facilitation (given time to spend on intervention) from own organization (higher management, HR)
- Conversational skills training on mental health and work
- Safe working climate and openness to discuss mental health with employee without interference or effect on performance assessments or contracts
- Information about rules and regulation on prevention of sick leave and on roles and responsibilities of themselves, OHP and employees and information about boundaries where to hand over to OHP or another expert
- Knowledge and skills on interventions to offer (internal and/or external), in order to support SAW
<b>Preferences in an intervention</b>
- Addresses employee’s needs (self-control in work, sense of responsibility to address problems, matching and evaluating work, freedom to create opportunities for active coping, tailored work accommodations and interventions.)
- Easy access and strong collaboration with OHP, by receiving advice/consultation on a case or a coach
- Autonomy as supervisor for a tailored approach or exceptions
- Coaching to increase knowledge and positive attitudes of supervisors towards diversity and mental health
- Guidelines with practical tools and actions (tips & tricks)

From this comprehensive needs assessment, we conclude that strengthening the individual supportive behaviour of the supervisor seems crucial to promote SAW among employees who struggle but stay at work. More specifically, we hypothesize that intervening on strengthening behavioural determinants of supervisors (e.g. attitude, skills, self-efficacy) will lead to supportive behaviour, which in turn might enable employees with CMHP to (partly) stay at work. Furthermore, the needs assessment revealed that supervisors can only effectually signal mental health issues and support employees with CMHP in a safe organizational climate. Having strong work relations among team members and supervisor and to know employee’s regular working behaviour seems conditional for a “mentally healthy workplace”. Supervisors expressed a need to be strengthened through coaching in ways to promote SAW among these employees.

### **3.2. Step 2: Outcomes and objectives using a logic model of change**

#### **3.2.1. Program outcomes**

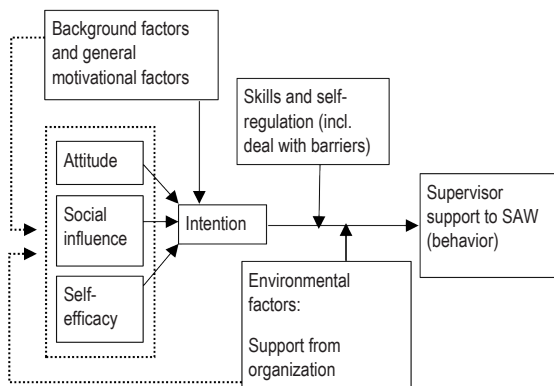
In the second step, together with the planning group, a specific logic model of change was developed including program outcomes and objectives. The model was chosen based on the literature and group discussion on the feasibility of this model in the study context. The Integrated model of behaviour

prediction for employers (37), depicted in Fig. 2, is selected as the logic model of change. This model assumes that the supervisors' individual behaviour is based on their *skills*, as well as on their *intention*, influenced by attitudes, social pressure, self-efficacy and general motivational factors. This model incorporates general motivational factors and environmental factors, that permits in our model of change to adhere an integrative approach with the work environment. It also adds Bandura's notion of self-efficacy, and intention, attitude and social norms, as an extension of the reasoned action approach (31). Reflecting on the results of the needs assessment, those behavioural determinants match well, as it is important to have positive attitudes and social influences towards mental health at the workplace and believe in themselves (self-efficacy) to signal and address problems with employees. Supervisors may need to increase skills on how to deal with problems at work due to CMHP. Besides, this model integrates environmental (organizational) factors that influence the behaviour of supervisors. These reflect for example organizational support, team responsibility, the role of higher management, or the learning climate within the organization. Prioritization occurred by selecting the most relevant and changeable actions for supervisors, so these environmental, mostly contextual factors are therefore considered as basic conditions and not addressed as outcomes of the intervention. Criteria to select these actions were that actions were work-related, prioritized as important in the concept mapping study and selected on relevance and changeable by SV and OHP in the focus group sessions.

In conclusion, supervisor's support outcomes were defined as follows:

- The supervisor's intention to support, which may be influenced by general motivational factors, attitude, social influence, self-efficacy;
- The supervisor's skills to support and how to deal with problems at work;
- The supervisor's actual supportive behaviour, which may be influenced by the intention, skills and environmental factors.

Figure 2. Step 2: logic model of change: Integrated model of behaviour prediction, applied to supportive behaviour of supervisors.



### 3.2.2. Performance objectives and change objectives

The main objective of the intervention is to strengthen the supervisor’s supportive behaviour to promote staying at work for employees with CMHP. A large variety of behavioural actions were mentioned, resulted from the needs assessment. Subsequently, the abovementioned behavioural outcomes were operationalized into a sequence of actions, clustered into five performance objectives (table 2). These five performance objectives are based on the “employee’s journey”: from having no problems in work to being on short term sick leave due to CMHP. Translating the performance objectives into more specific change objectives involved a thorough and rigor selection of behavioural determinants. A matrix of these change objectives was developed. Table 3 provides three examples of change objectives per determinant, aiming to define what the supervisor has to learn or change in order to perform the specific behaviour (42). Full matrices are available upon request.

Table 2. Step 2: performance objectives

<b>Performance objectives to promote Stay at work for employees with CMHP</b>
1. Supervisor learns the signals and risk factors of CMHP and the impact of early signalling on work outcomes
2. Supervisor is able to talk with employee about the way CMHP affect one’s work
3. Supervisor is able to stimulate employee’s autonomy and sense of responsibility once MHP affects work
4. Supervisor learns to explore, facilitate and regularly evaluate job accommodations to match employee’s work with capacity and needs
5. Supervisor turns on support from OHP department and facilitates interventions on team or individual level

Table 3. Step 2: matrix with examples of change objectives per performance objective, based on the behavioural determinants.

Performance objectives for supervisor	Logic of problem (from needs assessment)	Attitude [A] Social influence [S] Self-efficacy [E]	Skills, knowledge and self-regulation	Behaviour
<b>Change objectives for employees with CMHP to stay at work, the supervisor:</b>				
Talks with employee about the way mental health issues influence work	<ul style="list-style-type: none"> <li>- Awareness raising on mental health</li> <li>- Balance between job demands and control</li> <li>- Conversational skills training on mental health and work</li> <li>- Professional support from OHP</li> </ul>	<ul style="list-style-type: none"> <li>- Sees own role as crucial to support SAW [A]</li> <li>- Believes that employee with CMHP can work [A]</li> <li>- Sees how other supervisors support [S]</li> <li>- Shows understanding, empathy [E]</li> <li>- Has confidence to bring up work issues related to CMHP [E]</li> </ul>	<ul style="list-style-type: none"> <li>- Able to observe and ask what employee needs</li> <li>- Knows about interventions to offer</li> <li>- Has conversational skills for sensitive topic</li> <li>- Encourages employee to share own solutions</li> <li>- Knows barriers on what (not) to ask</li> </ul>	<ul style="list-style-type: none"> <li>- Asks what employee needs to SAW</li> <li>- Initiates dialogue by listening, and mirroring observations from work-related issue</li> </ul>
Stimulates employee's autonomy and sense of responsibility once CMHP influences work	<ul style="list-style-type: none"> <li>- Employee's experience of autonomy</li> <li>- Active coping</li> <li>- Information about roles and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>- Believes in autonomy and responsibility by employee [A]</li> <li>- Knows how to stimulate employee to feel boundaries and say yes/no [E]</li> <li>- Is confident that employee can and will take control [E]</li> </ul>	<ul style="list-style-type: none"> <li>- Has skills to coach employee on a balanced sense of responsibility</li> <li>- Has knowledge on risk factors, signals</li> </ul>	<ul style="list-style-type: none"> <li>- Stimulates employee to find own solutions but takes over when necessary</li> <li>- Encourages employee to act on work-related and private issues</li> </ul>
Supervisor talks with employee to match needs and capacity with work through job accommodations to SAW.	<ul style="list-style-type: none"> <li>- Ways to match employee's capacities to work</li> <li>- Supervisor's knowledge and skills on interventions</li> <li>- Easy access and strong collaboration with OHP</li> <li>- Supervisor's autonomy to apply tailored approach each employee</li> </ul>	<ul style="list-style-type: none"> <li>- Is open to temporarily job accommodations to SAW (reduce/change work / workplace) [A]</li> <li>- Knows boundaries on helping as supervisor and handover to OHP [S]</li> <li>- Is confident to find solutions with employee or gets support from OHP [E]</li> <li>- Is confident to make exceptions so employee can SAW, explains accommodations to team [E]</li> </ul>	<ul style="list-style-type: none"> <li>- Has knowledge about job accommodations and MH interventions</li> </ul>	<ul style="list-style-type: none"> <li>- Investigates with employee tasks, priorities and job accommodations</li> <li>- Acts pro-actively on short term adjustments in work, besides giving space for interventions</li> </ul>

CMHP = common mental health problem; OHP = Occupational health professional; SAW = Stay at work

### 3.3. Step 3: Core values, methods and practical strategies

The same stakeholder groups as in step 1 selected core values of the intervention, see table 4. For example, that the intervention is practical, behaviour-oriented and can easily be used and delivered in various organizations. Also, participants emphasized that only providing an informative guideline is not enough to facilitate behavioural change. Ideas on types of interventions were psychoeducation through a guideline, tailored advice or consultation on individual case level and coaching on supervisor's behaviour.

Table 4. Step 3: overall themes resulting in core values mentioned by stakeholders

<b>Intervention should...</b>
1) Address the theme in a socially safe climate and through openness on mental health problems
2) Define roles and responsibilities of supervisors
3) Be available as an online tool (interactive with links to websites) and hardcopy
4) Contain practical tips and tricks, to strengthen intention, skills and behaviour in various common situations
5) Tailor amount of information to the level of experience and needs of the supervisor, including a short version due to time constraints that supervisors often have, and avoiding jargon
6) Be easy to adopt, to access and deliver for organizations
7) Provide an overview with information on tools and basic conditions based on best practices and real-life dilemmas

Thereafter, methods and practical strategies were chosen to influence the change objectives, using the best available evidence. In this way, each behavioural determinant (attitude, social influence, self-efficacy, knowledge, skills, self-regulation and behaviour) is covered by one or two methods (table 5). Literature on adult learning, health promoting behaviour and mechanisms of change was considered, see references in table 5. The selection of practical strategies was based on the core values, technical options, feasibility, findings of the needs assessment and existing knowledge. For example, active transfer of information goal setting, guided practice and action learning in group can be applied. Some strategies can be performed by supervisors independently, such as studying the content of the guideline, or identifying cases among their team members. Other strategies need to be carried out by the implementers (OHPs) of the intervention, through consultation or coaching sessions individually or in small groups. For example, to identify and adjust beliefs towards mental health or to provide feedback on conversing skills.



Table 5. Step 3: selected theoretical methods and practical strategies for the determinants identified for the SAW-SG intervention.

Determinant	Method	Practical strategy	Parameters for use by OHP or supervisor
<b>Intention</b>			
Attitude	- Belief selection [31] - Verbal persuasion [35, 38, 45]	- Identify current beliefs and strengthen positive beliefs and weaken negative beliefs Introduce new beliefs	- Self-study or discussion with OHP individually or in group with other SVs - Select (un)supportive believes on CMHP and work - OHP leads sessions about GL by providing information, questions, arguments and dilemma's
	- Modelling [46]	Identify role models Provide encouragement by stories and testimonials	- Mental health ambassadors discuss their work-related experiences with EM and SV in general - OHP speaks about success stories on how to SAW, possibly from within organization or videos.
Social influence	- Social pressure [31]	Create sense of urgency on economic and societal impact Show success stories	- Movie with success stories in GL - OHP creates sense of urgency, shows numbers, risks on negative work outcomes, and examples
	- Social comparison among SV [47]	Provide opportunities for interaction among SV, Peer support groups	- Create support systems among SV about GL - OHP/HR department brainstorm or facilitates peer learning through intercollegial consultation
Self-efficacy	- Feedback [48]	Providing feedback Training and sharing of learned lessons among SV	- SV conducts self-study on GL, self-reflection - OHP advices SV per case about supportive behaviour, based on GL themes, in interactive sessions, consultation - OHP facilitates sessions in which SV introduces case and actions, in constructive feedback loops
	- Goals setting and action plans [49, 50]	Evaluation and action plans (if this, then I will...plans)	- SV identify peer/coach to discuss - OHP coaches SV before dialogue with employee (if this, then I will...plans), supported by GL
<b>Skills</b>			
Skills	- Guided practice [46]	Conversation checklist Guided practice Skills training on communication about MH	- SV identify peer/coach to receive coaching on skills development - Use of checklists in GL on conversational skills - Example movies or referral to other courses - OHP encourages SV to use reflection tools and GL
Knowledge	- Awareness raising [51] Discussion [38]	Evaluating understanding of magnitude of problem	- OHP and GL provides information about risks of absenteeism - OHP and SV discuss statistics of absenteeism in organization - OHP tailors information about organization
	- Active transfer of information [52]	Providing written and verbal information	- Information web tool/pdf about MH and role SV - Links to reliable external resources OHP shows and discusses content of GL with SV
Self-regulation and deal with barriers	- Feedback [48]	Define current approach, strengths and weaknesses Feedback on behaviour.	- SV identify current approach, asks employees - OHP and SV identify solutions in GL for dilemmas in targets, internal processes that interfere with supporting SAW
<b>Behaviour</b>			
	- Goals setting and action plans [49, 50]	Diagram of actions Conversation checklist	- SV uses GL with diagram of actions to prepare - SV and OHP identify and evaluate goals and actions to increase employee's MH
	- Tailoring [53]	Tailoring material to needs Consulting a professional (OHP)	- SV uses GL according to own needs and time - Organization facilitates regular and low-key opportunity to receive coaching to apply GL
	- Action learning in group[54]	Inter-collegial working groups Peer support through inter-collegial consultation	- SV in group discuss recent cases and their actions, advice each other on alternative actions or tips

EM = employee with CMHP, SV = supervisor, OHP = occupational health professional, MH = mental health, GL = guideline

### **3.4. Step 4: Production and pre-test of intervention and materials**

In this step, all gathered information from previous steps was synthesized to produce the intervention. Below, the scope and sequence of the SAW-SG intervention is presented, consisting of an online guideline and coaching sessions. Thereafter, findings of the pre-test are reported.

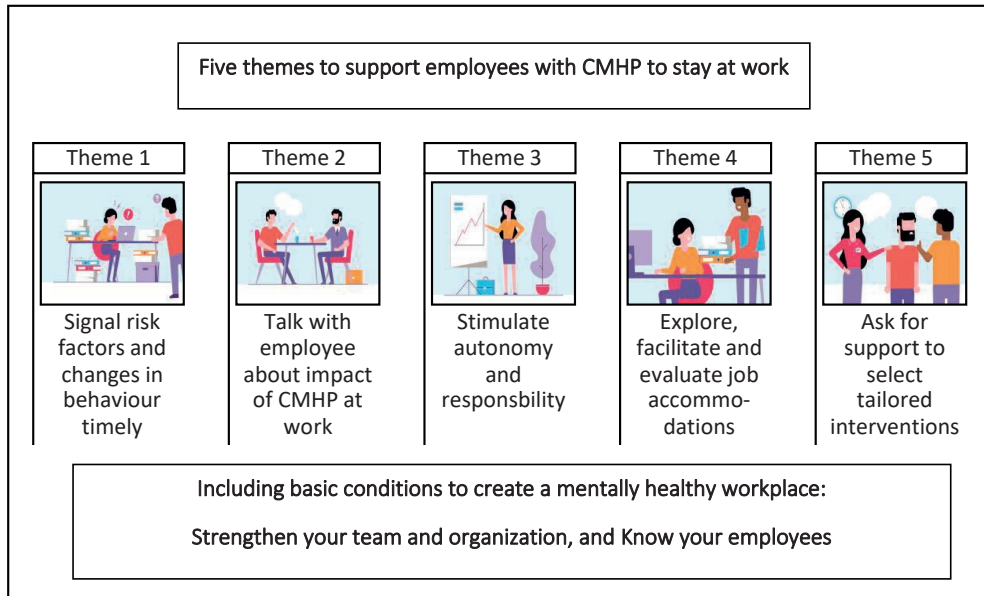
#### *3.4.1. Online guideline*

The online guideline provides the supervisor with five step-wise themes on how to promote SAW (Fig. 3): 1) signal CMHP affecting the employee's behaviour or work timely, 2) talk about impact of CMHP at work, 3) stimulate employee's autonomy and sense of responsibility, 4) explore, facilitate and evaluate job accommodations to match work with employee's needs and abilities, and 5) ask for occupational health support to select tailored interventions. Each theme is presented in three 'layers': from short and simple to long and more in-depth information, in order to tailor the amount and depth of information to the available time and needs of the supervisor. The first layer provides the most important actions presented in bullet points for supervisors, the second layer includes brief explanation and more specific actions, and the third layer offers the complete theme, including dilemma's, checklists and additional information (53).

In general, the guideline stresses the dialogue between supervisor and employee. As shown in the needs assessment, much can be done by the supervisor in supporting employees who struggle with CMHP but are still at work. How persons talk about sensitive topics, such as their mental health, will depend much on the pre-existing relationship of employee and supervisor and the social climate in the work environment. Therefore, the guideline offers optional, supplementary information for supervisors to contribute to "mentally healthy workplaces", concerning the environmental factors. This information is presented by two categories with basic conditions. The first category represents ways to know your employees in their regular work, e.g. on work values of employee, promoting a relationship of trust, attention for risk factors. Also, it addresses how to create a good fit between employee and their work and gives examples of interventions, both internal and external. The second category with basic conditions reflects ways to strengthen your team and organization on team-responsibility, safe working climate, social support among colleagues, mental health literacy and goals based on a shared vision on a 'mentally healthy workplace' and psychosocial work exposures, such as job strain.

Before the pre-test, the guideline was carefully reviewed as a member check to increase internal validity. The reviewers (editor on language, planning group and OHPs) appreciated the information presented in 'layers'. They suggested to ensure the use of simple language so that supervisors supporting employees with a low socioeconomic position can also use the tools. Furthermore, they suggested to digitalize the guideline into an online product, a website, to increase accessibility and usability.

Figure 3. Step 4: overview of the Stay at Work Supervisor Guideline (SAW-SG) online version.



### 3.4.2. Interactive coaching sessions

Based on suggestions given by stakeholders and the selected methods and practical strategies, the interactive part of the intervention is drafted as follows. The guideline will be delivered through one plenary introduction session, followed by three monthly coaching sessions with supervisors, either individually or in small groups. Supervisors and OHPs mentioned that because it is a new approach, it is important to include other stakeholders within the organization in the process to create a supporting base on the organizational level, e.g. by inviting the HR professional during the introduction session. They also emphasized on the importance of delivering the intervention through the interactive coaching sessions. In those sessions, parameters for use (table 5) are given, based on the needs assessment, chosen methods and strategies. For example, creating sense of urgency, identify possible solutions, advising supervisors per case and discussing dilemmas. These sessions were drafted around the content of the guideline, using input, such as cases or dilemmas brought up by supervisors to stimulate self-efficacy, skills and supportive behaviour. Ideally, these sessions were held by an independent OHP who has the following skills to apply the selected strategies: conversational skills on sensitive topics with both employers and employees and generally strong meta-communication skills such as non-judgemental listening, being patient and use of motivational interviewing. To ensure quality in those sessions, OHPs were trained on the guideline and coaching sessions before delivering the intervention, though a training based on the training protocol and training materials to facilitate the implementers.

### 3.4.3. *Pre-test of the intervention*

The prototype, a pdf version of the online guideline, was pre-tested by OHPs (n=8) and supervisors (n=7) on its usefulness, user-friendliness, and attractiveness. One supervisor dropped out due to time constraints. The pre-test was held fully online due to the COVID-19 restrictions in the autumn of 2020. The participants were positive about the guideline and found it useful, suitable and readable. Participants recognized the content of the guideline, its complexity and the practical information on actions to support. They also appreciated the 'layered' way of presenting information, however this could be improved using a website with more interactive and visual support. After the pre-test, the guideline was critically appraised and shortened by removing repetitions in text. Visual improvements were made on the online website to ease navigation and attractiveness. Also, more examples and actual workplace dilemmas were added. Lastly, as suggested by participants, an overview of all interventions available for employees to refer to was added.

As expected, participants confirmed that using the guideline by studying the five themes may increase intention (positive attitude towards mental health, social influence by feeling not alone in this, and self-efficacy since supervisors gain insight into their supportive behaviour through the guideline), however improvements in skills and actual supportive behaviour occurs through training and coaching. Therefore, participants particularly appreciated the interactive coaching sessions, in which they discussed the most applicable tools and actions in their particular situation and they were challenged to reflect upon their behaviour. They also suggested to invite someone with lived experience of CMHP, to share experience talking *with* employees rather than talking only *about* employees with CMHP. Therefore, we included this in the training of OHPs and during the introduction session with supervisors, by inviting employees who are experts by lived experience, from advocacy organizations.

OHPs mentioned that the training protocol offered them clear instructions on how to introduce the guideline, but at the same time they valued professional flexibility to adjust the selected strategies and training material in the interactive sessions to their own organization. They also found the selected strategies useful, for example to identify current beliefs and to set and evaluate goals through feedback.

### **3.5. Step 5. Planning for adoption and implementation**

In the fifth step, a plan for the adoption and implementation of the intervention was developed. The following requirements were identified for optimal adoption of the intervention. First, higher management of the participating organization should support the implementation of the SAW-SG. Second, representatives in organisations regarding occupational health services and human resources need to recognize the urgency of the problem (by high numbers of absenteeism) and need to be motivated to a novel intervention. Third, it seemed beneficial that the OHP and the particular representative in the organization have yet established a working relationship, which can help for example to identify supervisors as participants. Lastly, it is important that organizations receive clear and concise information about the process and content of the intervention, especially the benefits, costs and amount of time it takes for all involved stakeholders.

The experiences with the SAW-SG intervention will be assessed in an implementation and evaluation study in 2021. We aim to include approximately 20 OHPs for implementing the SAW-SG intervention, delivering the intervention to 3-6 supervisors per organization. Participants agreed on the following success factors for delivery of the intervention: that supervisors 1) are facilitated to spend at least 5 hours to this intervention spread over 3 months, 2) are interested in such a project and 3) have recently or currently had at least one employee with mental health issues in their team, in order to practice during the intervention.

### **3.6. Step 6. Planning for evaluation**

In the sixth and final step of the IM process, an evaluation design was chosen including a plan for the evaluation of the impact as well as the implementation process. To evaluate this intervention, we will use a realist evaluation approach answering the research question: what works (or not), for whom, under what circumstances and how (55)? We choose this theory-driven evaluation approach because implementation of interventions at the workplace highly varies as to how organizational support and occupational health services are organized (the circumstances), as well as the variety of implementation strategies (how does it work) between stakeholders on individual, interpersonal and organizational levels (and for whom). The forthcoming evaluation study will present results on the following aspects: the process of implementation, the mechanisms of change and contextual factors, leading to the intended and unintended outcomes.

## **4. Discussion**

This study presents the development of the Stay at work-Supervisor Guideline (SAW-SG) intervention to strengthen supervisor support, promoting employees with CMHP to stay at work. Development of the intervention was guided by the IM approach, which resulted in an online guideline and a training protocol for interactive coaching sessions to support supervisors. The online guideline contains five themes to signal and address problems in the workplace and find solutions by stimulating the employee's autonomy, explore job accommodations and ask for occupational health support. Labour experts as OHPs delivered the intervention as they are independent, and experts in matching employee's capabilities with work and work environment.

The SAW-SG intervention adds to the literature on workplace interventions in mental health, through an innovative, evidence-based intervention with a preventive approach by strengthening the supervisor's supportive behaviour regarding mental health at work. In line with these previous IM studies, we endorse that (individual) behavioural models on employee-level can be transferred to the behaviour of other workplace stakeholders as individuals who act as change agents in an organization. The additional value of the Integrated model of behaviour prediction was the integrative approach towards behaviour, in which environmental and general motivational factors also were included in the intervention, both content wise by the included basic conditions in the guideline and for delivery through the implementation strategies. In this, the intervention targets the complexity between individual behaviour and actions, and the interaction, often on a interpersonal level, with the

work context. Although it is challenging to realize changes in organizational culture or support systems, this study made a first step by facilitating change on the interpersonal level by improving the interaction between OHP, supervisor and employee (34). Nevertheless, we did not specifically target psychosocial work exposures that significantly associated with mental health outcomes, as revealed in a recent meta-analysis (56). Reflecting on our intervention, these were indirectly addressed in the basic conditions (job strain, psychological demands) and in theme 3 and 4 respectively (stimulating autonomy of employees to avoid decision latitude and explore job accommodations to adjust long working hours).

Staying at work, for employees with CMHP, is a relatively new concept, that is not clearly defined in the literature (5). This implies also that ways to promote stay at work are not yet profoundly developed and evaluated in the literature. Therefore, a considerable amount of time was needed to identify promoting factors to SAW for which we used both theory and practice during the needs assessment. Theory of working mechanisms to stay at work on both employee-level and organization-level were retrieved by a systematic realist literature review (5). In addition, these promoting factors to stay at work for employees and the role of the supervisor were verified in practice with various workplace stakeholders through a concept mapping study (57) and focus group discussions. Altogether, this provided content to the intervention, including practical ways to support employees with CMHP who struggle at work. As a result, this study adds to the conceptualization of staying at work.

This intervention turned out to target three key areas, namely general awareness on mental health, basic conditions for a mentally healthy workplace and five stepwise themes with actions to support employees with CMHP. In its essence, these all reflect the way supervisors do position and treat employees with CMHP. Promoting a trustful relationship between supervisor and employee, both before and whilst struggling at work due to mental health problems, was highlighted by all participants as a main challenge for supervisors. In this, the dialogue between employee and supervisor is an important element to signal and talk about symptoms in an early stage. Supervisors addressed the necessity of such an intervention to train all supervisors addressing 'soft skills', possibly mandatory, contributing to the quality of this dialogue (39). As found in other studies, they need to be facilitated by their organisation, through individual coaching and peer learning through consultation among colleague-supervisors (22, 32). It underscores the growing realization by employers that they should and can act pro-actively in prevention to promote mental health at the workplace, by being given the appropriate guidance (58).

Non-surprisingly, many of the actions and themes addressed in the guideline seemed relevant to all employees: those with and without CMHP. All participants in our study stressed the early signalling and addressing of work-related issues, in a phase that mental health problems are present but not (yet) lead to sick leave. There is a thin line, especially in prevention, between addressing mental health *in general* and addressing mental health *problems that affect one's work*. Thus, it can be argued that our intervention does not only benefit employees with CMHP but all employees, possibly resulting into more trustful and sustainable working relationships. We observed during our study that investing in awareness and skills among supervisors leads to more attention and

empathy for mental wellbeing of employees in general. Also, basic conditions to create mentally healthy workplaces were addressed, that may reduce psychosocial work exposures that associate with negative health outcomes (56). Another study found that this may eventually create more disclosure about mental health issues at the workplace leading to adequate supervisor support (24).

The SAW-SG intervention was tailored to the rather new role of labour experts as OHPs in the Dutch context, shifting their services in return to work trajectories towards prevention. Various workplace stakeholders in our study appreciated the role of these implementers. Reasons were that they are being trained to match employee's needs with the work functioning and work environment, being independent, pragmatic and familiar with the work environment, as suggested by the literature in the needs assessment (5). However, selecting labour experts as OHPs to deliver this intervention has its limitations. Firstly, the recruitment of labour experts in this study showed that especially those who feel competent to offer psycho-education and coaching are interested to deliver such an intervention. This is a relatively small group having these skills due to various educational backgrounds before these professionals join their training for labour expert. Secondly, many organizations do not have access to a labour expert as OHP. This may limit the broader, nationwide dissemination of the intervention and its sustainability. Thirdly, in various other countries, the role of labour experts and other OHPs differs from the Dutch setting. Therefore, we believe that other OHPs such as organizational psychologists, HR managers who are trained in prevention and mental health or occupational health nurses could also deliver the intervention.

#### **4.1. Methodological considerations**

Intervention mapping was considered as a valuable tool as it provided a systematic process to identify, structure and prioritize factors and select practical strategies to induce the targeted behaviour. Our initial idea was to develop a guideline, offering information to employers on how to promote SAW for employees with CMHP. However, the evidence gathered in the IM steps and a rigor, theory-based approach, led to the insight that such a guideline can only be effective when delivered through interactive sessions. Therefore, we elaborated the intervention. Although we followed the IM procedure stepwise, we reflected on previous steps also, which led to more optimal use of the input from participants. For example, when reducing the content of the online guideline after the pre-test (step 4), we moved back to the needs assessment to reprioritize the changeable factors.

Especially employers indicated that they need an intervention that can be tailored and easily accessed. IM has been helpful to ensure that despite the plethora of factors to promote SAW, the intervention resulted into a manageable and accessible amount of information. Also, the IM approach helped the researchers to actively and early involve a broad range of stakeholders, that is often aimed by researchers but hard to realize in practice. Paying particularly attention to the participative planning group and workplace stakeholders in each step led to strong adherence and commitment throughout the process (41). OHP and employers were actively involved throughout the IM-process, resulting in an intervention that is well-received. Representatives of employees with CMHP were actively involved, however, we could not collect data on employee-level during the pre-test, due to privacy

regulations and sensitivity to disclose CMHP. It would have been better to investigate the perception of employees with CMHP, as done in a previous study by Bjork Brämberg et al. (58). This also applies to the implementation and evaluation phase, as we target the behaviour and behavioural determinants of supervisors as a direct, proximal outcome of the intervention. Due to the given reasons above and due to various external factors resulting in employee's well-being or perception of supervisor support, we choose not to evaluate on those outcomes.

Among both supervisors and OHPs, there was some ambivalence regarding the delivery and adherence of the guideline and training protocol, in which on one hand participants appreciated the specific tools and actions on how to support employees with CMHP. On the other hand, they emphasized on their professional flexibility, especially to consider and weigh actively the suggested actions versus the specific case, stimulating a critical attitude towards their own behaviour. Therefore, we decided to present actions in the guideline as options and facilitate feedback and discussion through the interactive coaching sessions. Likewise, we provided suggestions for training material and practical strategies for OHPs, but left room for adjustments. Permitting this level of flexibility in intervention delivery and adherence is somehow contrary to the IM approach, that provides a structured way to monitor and ensure the delivery of the intervention as intended (59). As a result, there may be a difference between the suggested tools and actions and the actual supportive behaviour. Thereby, the pilot implementation and evaluation study can provide more insights on the use of the guideline, and what worked, under what circumstances, how and why.

#### ***4.2. Future research and practical implications***

Although the IM process was valuable, it does not guarantee for success (41, 59). The forthcoming implementation study will lead to information about the process and impact of the SAW-SG intervention, including the feasibility of selected outcome measures. This will inform researchers and professionals how the intervention can be imbedded in organizations and in educational programs for labour experts and other OHPs. Resulting from this study, we suggest that, through the IM approach or other approaches, researchers and program developers should actively involve multiple stakeholders throughout the process, on a basis of partnership. Ideally, both implementers, users (e.g. supervisors) and ultimate beneficiaries should be involved from as early as possible until evaluation and dissemination.

In such intervention development it is hard to grasp what actually happens during delivery, in line with our choice to allow professional flexibility in intervention delivery for both OHPs and supervisors to tailor information according to their needs (59). In future research, we suggest to investigate in practice which strategies have been used during the implementation phase and what the effect was of each. Namely, each strategy can be considered a micro intervention, in which different working mechanisms may be triggered in specific circumstances, leading to intended or unintended outcomes. To better understand those, we recommend to use alternative paradigms to the use of RCTs to bring novel insights into the conditions of their implementation, impact and generalization of the intervention, such as realist evaluation (41, 55, 60).



The presented intervention targets mainly organizations in which there is a rather traditional 'supervisor-employee' relationship based on a rather traditional type of employment in which the line manager is the representative of the formal employer of the employee who has an employment contract. Participants in this study mentioned that the intervention may not (yet) be suitable for more modern, upcoming, types of employment, such as temporary employment agencies, secondment agencies and self-managing teams. Also, we reached mainly large-sized companies and struggled to include medium-small sized companies. Those diversities in employment types may require different implementation strategies or further development of the current guideline.

### **4.3. Conclusions**

This study describes how the 'SAW-Supervisor Guideline' intervention was developed to strengthen supervisor support, resulting in an online guideline and interactive coaching sessions. The guideline addresses five themes on how to promote SAW while employees with CMHP struggle at work, based on the best available evidence. Also, it proved the importance of the dialogue between employee and supervisor, before and while struggling at work due to mental health issues, based on a trustful relationship. This intervention seems promising as it responds to the needs of supervisors in their role, responsibility and ways to support employees with mental health issues, through a behaviour-oriented, preventative approach. Supervisors learn how to signal and address mental health issues and match work and the working context with capabilities of employees. Intervention mapping provided a systematic process to identify, structure and prioritize goals and elements on how to promote SAW. The active involvement of workplace stakeholders throughout the process led to a well-received intervention with feasible implementation strategies. The Integrated model of behaviour prediction provided insights into novel, practical ways to induce the targeted behaviour of workplace stakeholders, bridging theory with practice. The results of the realist impact evaluation on this intervention will be available in 2022.

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## Chapter 6

### A workplace intervention to strengthen supervisor support for employees with common mental health problems: a mixed methods realist evaluation

This chapter is submitted for publication as:

Van Hees SGM, Carlier BE, Joosen MCW, Blonk RWB, Oomens S. (Submitted, under review). A workplace intervention to strengthen supervisor support for employees with common mental health problems: a mixed methods realist evaluation.

## **Abstract**

The purpose of this study is to obtain insight into whether, how and under which circumstances a novel workplace intervention works. This intervention aims to strengthen supportive behaviour of Dutch supervisors in promoting work participation of employees with common mental health problems (CMHP). The intervention consisted of an online guideline and coaching sessions for supervisors, provided by occupational health professionals (OHPs). In a mixed-methods realist design, we tested for changes over time on supportive behaviour and behavioural determinants (i.e. self-efficacy, social influence, attitude, intention and skills). In addition, the influence of personal, environmental and intervention factors on changes were assessed. These quantitative data were collected using questionnaires at baseline, post intervention and post follow-up. Qualitative data through interviews with supervisors were collected to validate the initial program theory and provided insights on mechanisms. Compared to baseline (n=92), supportive behaviour, self-efficacy and skills of supervisors increased significantly post intervention (n=65, 3 months) and post follow up (n=56, 6 months). A statistically significant regression model ( $R^2 = 0.29$ ) indicated that factors such as being assessed on sick leave numbers, previous collaboration between OHP and supervisor, and having dealt with CMHP before were related to the changes. According to supervisors, working mechanisms on the interpersonal level were expertise, trust, accessibility of the OHP and social support among co-supervisors. On the individual level, mechanisms were self-efficacy, willingness to learn and use of action planning. Conditional organizational circumstances were being given time and structural, low-key access to OHP expertise, in a safe learning climate. This preventive, multifaceted, action-oriented workplace intervention had a positive impact on supervisor support in promoting work participation among employees with CMHP. These findings may encourage employers to invest in the capacity of supervisors, thereby enabling employees with CMHP to keep working and perform well in their jobs.



## 1. Introduction

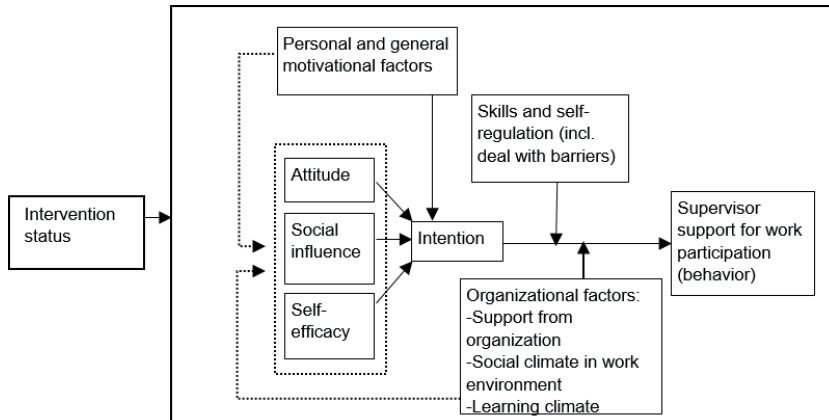
Over the last decades, mental health of employees is a growing concern due to increasing numbers of absenteeism or reduced work performance in the western world (4). Research shows overall moderate, yet positive evidence for the value of workplace interventions to prevent or reduce negative work outcomes among employees with common mental health problems (CMHP) (5, 6). However, workplace stakeholders, especially supervisors or line managers, feel unsure about how, when, why and through what strategies to promote work participation (e.g. staying at work, work performance) (5, 7). To illustrate, 40 percent of a representative panel of Dutch employers reported not to know how to support employees with CMHP to continue working (7). This is particularly challenging in prevention, where practical guidelines on increasing skills to promote work participation are scarce (9, 10). Furthermore, in case of common mental health problems, such as depression, anxiety or stress, symptoms often develop slowly and saliently, and employees fear disclosure due to stigma (11, 12). This adds to the complexity to early detect problems and offer adequate solutions to promote work participation outcomes such as stay at work and work performance.

Supervisors have shown to be key workplace stakeholders to signal and address (the onset of) behavioural changes in the workplace due to mental health problems (13-16). Psychosocial work exposures, including (lack of) supervisor support, are often considered as (one of) the causes of CMHP, and at the same time the solution to enhance mental health and work participation (17, 18). A supportive supervisor can facilitate employees with CMHP, e.g. by offering job accommodations or time off work for psychological treatment (19, 20). Interventions to strengthen supervisory capacity and supportive behaviour may have a positive impact on work outcomes. However, there is still limited evidence on effective supervisory interventions and how they bring about positive or increased work outcomes (21).

Although workplace interventions have been shown promising in preventing mental health problems for employees (22, 23), it is yet unknown what the effects of such interventions are on actual supervisors' supportive behaviour (24). Preventive interventions that target supervisors' behaviour as a mechanism of change in employee well-being and work outcomes consist of elements such as a behaviour oriented approach (24-26) and a participative problem solving approach (27). Therefore, it may be worth it to take supervisor's behaviour and behavioural determinants as outcomes of a workplace intervention. We chose the Integrated model of behaviour prediction for employers to frame supportive behaviour (figure 1) (28).

Return to work studies show that involving the occupational health professionals (OHPs) could be a way to strengthen supervisory support, leading to increased opportunities to stay at work for employees with CMHP (18, 29). We hypothesize that, to strengthening supportive behaviour, knowledge and practical expertise from return-to-work trajectories can be transferred to a preventive phase while employees are still at work. This could be achieved through alignment and involvement of employees, supervisors and OHPs in workplace interventions (30).

Figure 1. Integrated model of behaviour prediction, applied to supportive behaviour of supervisors.



To better understand the working mechanisms of workplace interventions, researchers call to further explore causal relations between intervention components, organizational factors, mechanisms and outcomes, in addition to measuring effects by randomized and quasi-experimental, controlled designs (31). Further, it is hard to control for implementation quality, as the work environment and capacity of all stakeholders is highly situation-specific (32). In response to those challenges, we apply a realist evaluation approach to explore how mechanisms bring about the resulting outcomes in context-specific ways (33). Context is not viewed as something that can be kept stable, as in a controlled experiment, but rather as a multifaceted factor that impacts whether intervention mechanisms work as intended (34). This may also help to interpret the gauged evidence to practical guidelines (5). The aim of this study is therefore to gain insight into the impact of a workplace intervention to strengthen supervisor's supportive behaviour, and to unravel and understand how and why it works, for whom and under which circumstances. The intervention "Stay at Work-Supervisor Guideline (SAW-SG)" consists of an online guideline and coaching sessions provided by OHPs on work participation for employees with CMHP. We propose the following three research questions.

1. What are the changes over time, regarding supportive behaviour of supervisors (primary outcome) and self-efficacy, social influence, attitude, intention and skills (secondary outcomes) between before (t0) and post intervention after three months (t1) and at follow-up after six months (t2), participating to the SAW-SG intervention?
2. Which personal factors, organizational factors and intervention factors contribute to the changes in supportive behaviour (primary outcome) after participating to the SAW-SG and to what extend?
3. What mechanisms are triggered, leading to the outcomes of the SAW-SG intervention?

Those research questions were answered, gaining a greater insight into the impact of a successful workplace intervention and its mechanisms and circumstances leading to strengthened supervisory support for employees with CMHP.

## 2. Methods

In the study a novel intervention for supervisors to promote work participation of employees with CMHP is evaluated using a mixed-methods realist design. A mixed-methods realist design was chosen, in order to triangulate results and provide a more in-depth evaluation of the mechanisms of change, to inform research and practice. Box 1 provides the definition of realist terms.

Box 1.

**Definition of realist terms**

*Initial program theory:* the working hypotheses from the researchers who design and evaluate an intervention (1).

*Context:* context refers to “something that enables or disables the current mechanism of interest” (1). It often refers to the ‘setting’ of programs and research. As conditions change over time, the context may also reflect aspects of those changes while the program is implemented.

*Mechanisms:* mechanisms are underlying, latent entities, processes or structures that lead to influence the outcome (2). This can refer to processes within the participant of an intervention or exposure (resources), their cognitive and emotional responses (reasonings), typically related to the intervention or exposure being offered (3).

*Outcome:* an outcome is what can be measured in terms of impact across the target population, using measurable or measured indicators. Outcomes can be considered as quantitative or qualitative, and intended or unintended (8).

*CMO configuration:* describes the causal links between context, mechanisms and outcome considered as causative explanations pertaining to the evidence on the topic of interest (1).

### **2.1. Setting and study participants**

In the Netherlands, according to the Dutch Gatekeeper Improvement Act (35), the employer is responsible for the return to work trajectory of sick-listed workers during the first two years of sickness absence. During this time, employers are obliged to contract and consult occupational health services to support the return to work process, however not prior to sickness absence. OHPs who are educated as “labour experts” in the Dutch social security system provide those services and could also provide preventive interventions. Labour experts act independently and are expert in matching the employee’s work capacities with the work environment. In our study, 23 OHPs were recruited by social media announcement and on the website of the national association of labour experts and large occupational health service practices. The OHP selected the participating employer organizations (28). Selection criteria for OHPs to be included in our study were to have 2 to 6 supervisors available to participate in the intervention. Most Dutch employers have contracted independently operating OHPs or contracted occupational health services. In our study, contracted OHPs, independently or through the occupational health service were included, or OHPs who were employed (and internal) by the participating organization. Participation for supervisors contained attending the intervention activities, free access to the guideline and data collection activities, implying three questionnaires of 15 minutes (baseline, post intervention and post-follow-up). Each participant in this manuscript has given written informed consent to participate to the study and to publish these case details. This study has been approved by the Ethical Review Board of Tilburg University, The Netherlands (RP423). This study is reported in accordance with the Rameses II reporting standards for realist evaluations (36).

## **2.2. Procedures**

Both quantitative and qualitative data were used to evaluate the intervention. We used quantitative data to evaluate whether the intervention works (change over time), for whom and under which circumstances (testing for personal-, organizational- and intervention factors). Questionnaires were distributed at baseline (t0), directly after the intervention at 3 months (t1) and post follow-up, at 6 months (t2). We drafted an initial program theory, based on our previous studies, other previous research, the theoretical model and the pre-test (28). The formulation of program theories about the intervention and its implementation strategies may help ensure that those strategies that have a greater likelihood of bringing about the intended outcomes (37). Next, we validated the initial program theory by interviewing supervisors at baseline, who participated in this study (n=15). This helped us to specify circumstances that trigger mechanisms supposed to be necessary for the intervention to have impact (see Appendix 1). At post follow-up, we also collected qualitative data to explain and nuance results on how and why the intervention works. Interviews were conducted with participating supervisors, before the baseline questionnaire and post follow-up. The data of the study were collected in 2021.

The SAW-SG intervention consisted of 1) the online, theory and practice-based guideline and 2) four coaching sessions to increase supervisor supportive behaviour (online: [Blijven werken met psychische klachten \(han.nl\)](#)) (28). Regarding the first part, the guideline provided the supervisor with suggested actions presented as five step-wise themes on how to promote work participation: 1) signal CMHP that affect the employee's behaviour or work timely, 2) talk about impact of CMHP at work, 3) stimulate employee's autonomy and sense of responsibility, 4) explore, facilitate and evaluate job accommodations to match work with employee's needs and abilities, and 5) consultation of occupational health support to select tailored interventions. Additionally, the guideline included two main categories of basic environmental conditions for supervisors: 1) ways to know the employees well in their regular working behaviour and 2) ways to strengthen the team and organization. In addition, the intervention was implemented by OHPs through coaching sessions with supervisors, either individually or in small groups (2-6 participants). These sessions focussed on the use of the online guideline, using current cases or dilemmas brought up by supervisors, aiming to stimulate awareness, self-efficacy, skills and supportive behaviour. Beforehand, OHPs were trained on the content of the guideline and implementation through coaching sessions. A training protocol and training materials were used to ensure implementation quality. The intervention took three months. Between 3 and 6 months there was a 'follow-up period' with optional additional coaching about this topic, with OHP being available for consultation on request of the supervisor.

## **2.3. Measures**

Measurements took place at baseline (t0), post intervention (t1, at 3 months) and post follow-up (t2, at 6 months). Supervisors were asked about their experience with the intervention, outcomes, personal and organizational factors. An overview of the outcome measures and other covariates in the questionnaire, the items and response options, the reliability of the scales and the operationalization of the outcome measure can be found in Appendix 2. For each scale we tested the reliability using

Cronbach's alpha. As a result of the drafted initial program theory, we added learning climate to the second questionnaire (t1) to be able to test for this post intervention.

### 2.3.1. *Primary and secondary outcomes*

The primary outcome is considered supportive supervisor behaviour. This concept is operationalized as self-reported behaviour using an adapted version of Ketelaar et al. (38) and Corbière et al. (39), based on the Spreitzer and colleagues' Empowerment questionnaire scale (40). Items were modified to the five themes in the guideline to fit the context of this study. An example is (theme 1): 'Over the last three months, I timely signal psychological complaints.'. 6 items (Cronbach's alpha: 0.81) were used, ratings were provided on a five-point Likert scale from totally agree to totally disagree. An average score ranging from 1 to 5 was calculated. Secondary outcomes were self-efficacy, intention, skills, attitude and social influence ranging from 1 to 5. Self-efficacy of the supervisor on how to support was measured using a scale with 6 items (Cronbach's alpha: 0.84) adjusted from Ketelaar et al. (38); intention to support employees with CMHP was measured by two items, using an adjusted version of Hendriksen et al. (41) (Cronbach's alpha 0.72); and skills items were based on the themes in the guideline adjusted from Ketelaar et al. (4 items, Cronbach's alpha 0.78) (38). Reliability of the attitude scale and social influence scale were relatively low (respectively Cronbach's alpha of 0.37 and 0.60) and single items scored very high at baseline. Therefore, we did not include these scales and single items in the further analyses.

### 2.3.2. *Personal factors*

Several factors were assessed as possible confounders to the intervention, based on the literature. For socio-demographic characteristics and general motivational factors, as proposed in the theoretical model, we measured the supervisor's age, gender, sector of organization, size of organization, years of supervisory experience, educational level of employees in team, being assessed on sick leave number by their own manager, dealt before with CMHP in personal life or at work, and whether the supervisor followed a course on a related topic in the last 5 years.

### 2.3.3. *Organizational factors*

Organizational factors included the following standardized measurement tools: organizational support, assessed by 6 items measuring the experienced organizational support (Cronbach's alpha 0.74) (41), learning climate as in being facilitated by the organization (Cronbach's alpha 0.83) and error avoidance by supervisors (Cronbach's alpha 0.67) (42).

### 2.3.4. *Intervention factors*

To unravel how the intervention works, items regarding the intervention factors were included in the questionnaire. The items were based on the initial program theory and the findings of the pre-test of the intervention (28). It contains questions regarding previous collaboration between OHP and the supervisor, frequency of sparring with an OHP or colleague by the supervisor and the way coaching sessions were organized in groups or individually.

#### **2.4. Statistical analysis**

First, descriptive statistics were used to summarize baseline characteristics of enrolled participants. Since all questions were categorized and compulsory, there are no missings and no outliers. Then, we tested difference scores of outcomes between baseline and post-intervention (t0-t1), and between baseline and post follow-up (t0-t2), using paired sample-t tests (two tailed, including bootstrap). Correlations between outcomes and all covariates were computed (see Appendix 3). Covariates for the final regression model were selected in two steps. First, Pearson correlation coefficients were inspected in relation to the primary outcome. Second, we used the theoretical model and initial program theory, searching for circumstances (personal, organizational, interventional factors) that may contribute to the changes over time. We conducted a multivariate backward regression analyses for the primary outcome (behaviour difference t0-t1 and t0-2), to calculate the explained variance of the model and the significance of included predictors. Variables were assessed for collinearity and interaction. We choose the model with the best fit based on 1) the highest explained variance, and 2) a significant F-ratio and significant coefficients. That included the following covariates: being assessed on sick leave number; learning climate: error avoidance, previous collaboration between OHP and supervisor; dealt with CMHP personally; followed a course, skills and self-efficacy. The statistical significance level was set at 0.05. All analyses were performed using SPSS version 27 (IBM Corp, Released 2011, IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY). See Appendix 2 for the code book (right column) and Appendix 4 for the used syntax.

#### **2.5. Qualitative data collection**

Participating supervisors (n=15) were selected at random before the start of the intervention. Post follow-up we first asked the same participants to be interviewed. Two supervisors did not participate in the follow-up interview, due to time constraints. One other participating supervisor volunteered to be interviewed post follow-up, giving a total of 14 interviewees. The interviews were semi-structured, conducted at baseline and shortly prior to the post follow-up measurement at 6 months. Interviews at baseline focused on interviewees' experience with workplace interventions and strategies how such an intervention could work, with purpose of 'theory gleaning' and 'theory refinement' of the initial program theory (43). Post follow-up, interviews focused on the experience with the SAW-SG intervention, and what in themselves (reasonings), in the intervention (intervention component) and in their organization/other external factors (circumstances) lead to the outcomes.

#### **2.6. Qualitative analysis**

Before baseline, based on the theoretical model and results from previous studies, we developed the initial program theory using retroduction, the activity of theorizing and testing for hidden causal mechanisms responsible for manifesting the empirical, observable world (44). The outcomes were inserted as 'codes' in the data analysis software, as described in Dalkin et al. (2021) (45). Thereafter, using code groups, we addressed relevant mechanisms and other factors leading to outcomes, resulting into Context-mechanism-outcome (CMO) configurations. A codebook was derived from both

deduction based on the initial program theory, as well as induction based on interview transcripts. Finally, two members of the research team analysed transcripts of baseline interviews (n=15) by refining or drafting new CMO configurations, to validate the initial program theory. Post-follow up, we analysed transcripts based on the encoded CMO-configurations, derived from the initial program theory. By using the transcripts we confirmed or recoded circumstances and mechanisms using code groups and adjusted code names (45). ATLAS.ti was used for analysis.

### **3. Results**

Below, we first present the characteristics of the study population. Then we present the answers to each research question revealing what works (research question 1), for whom and under which circumstances (research question 2) and how and why (research question 3).

#### ***3.1. Study population***

For baseline characteristics, see table 1. Participating supervisors mainly worked at large organizations in health care or public administration sector. 62 percent were female supervisors, and most supervisors were between 40 and 59 years old. The total sample consisted of 99 supervisors, of which 92 supervisors completed the baseline questionnaire (t0, response rate 93%). After the intervention, 65 supervisors completed the questionnaire (t1: 66%, 27 missings) and post follow-up 56 supervisors completed the third questionnaire (t2: 57%, 36 missings).

Table 1. Baseline characteristics of study population (n=92)

<b>Personal characteristics of supervisor</b>		<b>n</b>	<b>%</b>
<i>Gender</i>	Female	57	62,0
	Male	35	38,0
<i>Age</i>	18-29 years	5	5,4
	30-39 years	20	21,7
	40-49 years	27	29,3
	50-59 years	34	37,0
	60-67 years	6	6,5
<i>Sector</i>	Health care	37	40,2
	Public administration	21	22,8
	Business services	13	14,1
	Other*	21	22,9
<i>Size of organization</i>	Small (10 - 49)	2	2,2
	Medium (50 - 249)	16	17,4
	Large (250 and more)	73	79,3
<i>Supervisory experience, in years</i>	0-1	7	7,6
	2-5	26	28,3
	6-10	18	19,6
	>10	41	44,6
<i>Number of supervised employees (M (range), SD)</i>		66 (4-700)	93
<i>Educational level of supervised employees</i>	Low	9	9,8
	Medium	42	45,7
	High	41	44,6
<i>Dealt with CMHP personally</i>	Not (rarely, never)	46	50,0
	Yes (often, regularly, sometimes)	46	50,0
<i>Dealt with CMHP at work</i>	Not (sometimes, rarely, never)	39	42,4
	Yes (often, regularly)	53	57,6
<i>Being assessed on sick leave number</i>	No	40	43,5
	Yes	52	56,5
<i>Followed course in last 5 year about this topic (at t1)</i>	No	23	25,0
	Yes	42	45,7
<b>Organizational characteristics</b>			
<i>Organizational support (neutral =1 – totally agree = 3) (M, SD)</i>		2,18	0,59
<i>Learning climate: organization facilitates learning (at t1, n=65, M, SD)</i>		4,11	0,81
<i>Learning climate: error avoidance (at t1, n=65, M, SD)</i>		2,63	0,76
<b>Intervention characteristic</b>			
<i>Previous collaboration between OHP and supervisor</i>	No	50	54,3
	Yes	42	45,7
<i>Frequency sparring with an OHP</i>	Never/seldom	10	10,9
	Regularly	42	45,7
	Often/always	40	43,5
<i>Coaching received in group/individually</i>	Group	39	42,4
	Individually	24	26,1
	Both	29	31,5

\*agriculture, industry, construction, trade, transport, hospitality, IT, education, culture sports, recreation



### 3.2. Research question 1: does the SAW-SG intervention work?

Figure 2 shows the changes over time, using comparison of mean values for primary (behaviour), and secondary outcomes (self-efficacy, skills, intention) at baseline, post intervention and post follow-up. Results indicate increases in both primary and secondary outcome measure over time: supportive behaviour, self-efficacy and skills after the intervention and at follow-up. There was a significant increase of supportive behaviour between baseline and post follow-up (6 months) ( $p < 0.00$ ) and not significant between baseline and post-intervention (3 months) ( $p = 0.08$ ). There was a significant difference in mean scores of supervisor's skills and self-efficacy over time between baseline and post-intervention ( $p < 0.00$ ). Self-efficacy and skills showed also significant increases between baseline and post follow-up ( $p < 0.00$ ). Differences for intention were small and not statistically significant both post intervention ( $p = 0.88$ ) and post follow-up ( $p = 0.19$ ). Intention scored high at baseline as shown in figure 2.

Figure 2. Mean scores of self-reported supportive behaviour, self-efficacy, skills and intention (ranges 1-5), changes over time (baseline, post intervention and post follow-up,  $n=56$ ).

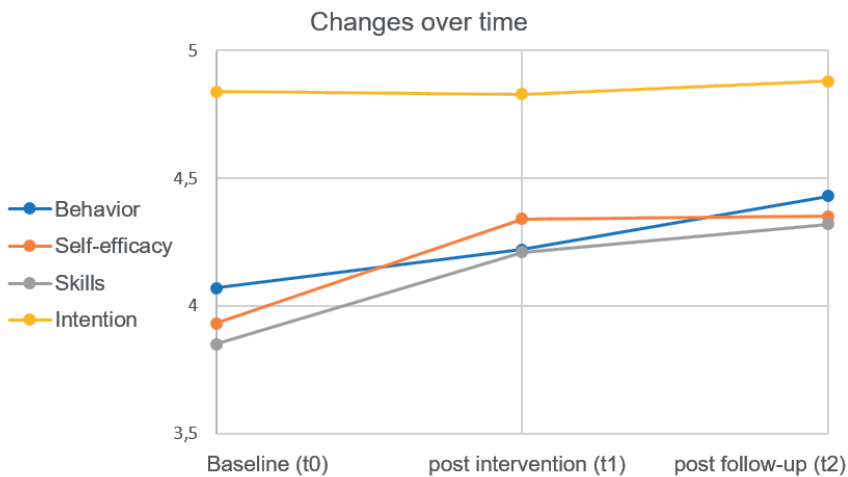


Table 2. Means of difference scores (standard deviations, confidence intervals t-value) and correlations post intervention (t1, n=65) and post follow up period (t2, n=56) compared to baseline (t0).

	M <sup>b</sup>	SD	CI		t	Behaviour t0-t1 <sup>c</sup>	Behaviour t0-t2
			Lower	Upper			
<b>Primary outcomes</b>							
Behaviour <sup>a</sup> t0-t1	0.15	0.68	-0.02	0.32	1.77	1	
Behaviour t0-t2	0.33**	0.63	0.17	0.50	3.98	0.68**	1
<b>Secondary outcomes</b>							
Self-efficacy t0-t1	0.36**	0.50	0.23	0.49	5.73	0.27*	0.20
Self-efficacy t0-t2	0.42**	0.54	0.28	0.56	5.84	0.25	0.34*
Skills t0-t1	0.29**	0.43	0.18	0.40	5.37	0.19	0.13
Skills t0-t2	0.41**	0.48	0.28	0.54	6.33	0.20	0.22
Intention t0-t1	0.01	0.42	-0.10	0.11	0.15	0.14	0.10
Intention t0-t2	0.07	0.40	-0.04	0.18	1.34	0.24	0.09
<b>Personal characteristics</b>							
Dealt with CMHP personally						0.15	0.13
Dealt with CMHP at work						-0.18	-0.25
Being assessed on sick leave number						-0.22	-0.14
Followed a course on the topic						0.01	-0.25
<b>Organizational characteristics</b>							
Learning climate: individual error avoidance						0.10	0.05
Organisational support						-0.22	-0.17
<b>Intervention characteristics</b>							
Previous collaboration between OHP and supervisor						0.33**	0.15

\*significant at the 0.05 level (2-tailed) \*\*significant at the 0.01 level (2-tailed) <sup>a</sup>Compared difference with t0, <sup>b</sup>M = mean difference, <sup>c</sup>Pearson Correlation, SD = standard deviation, CI = 95% Confidence Interval of the Difference. Correlations for all covariates included in the study can be found in Appendix 3.

### 3.3. Research question 2: for whom and under which circumstances does the intervention work?

From various covariates regarding personal factors, organizational factors, intervention aspects and secondary outcomes, only self-efficacy and previous collaboration between OHP and supervisor correlate significantly with the supportive behaviour of the supervisor (see table 2). The overall multivariate regression model for changes over time directly after the intervention was statistically significant ( $R^2 = 0.29$ ,  $F(6,56) = 3.80$ ,  $p = 0.00$ , explaining 28.9 percent of the variation in behaviour change. Supervisors being assessed on sick leave number (b-coefficient -0.33), previous collaboration between OHP and supervisor (b-coefficient -0.26) and self-efficacy (b-coefficient 0.33) significantly predicted supportive behaviour (see table 3). For post-follow up, the overall regression model was also statistically significant ( $R^2 = 0.27$ ,  $F(6,41) = 2.57$ ,  $p = 0.03$ ), explaining 27.3 percent of the variation in change between baseline and post follow-up. Self-efficacy (b-coefficient 0.29) and having followed a course on this topic (b-coefficient -0.38) as well as having dealt with CMHP personally (b-coefficient 0.34) were significant covariates predicting behavioural change at follow-up.

Table 3. Results of stepwise backward regression analysis of supervisor characteristics and circumstances on change in supportive behaviour (n=56).

Variable	Behaviour post intervention (t0-t1)			Behaviour post follow-up (t0-t2)		
	b-coefficient	t	Standardized Coefficients (Beta)	b-coefficient	t	Standardized Coefficients (Beta)
(Constant)/intercept	0.13	0.34		0.12	0.28	
Learning climate: error avoidance	0.19	1.74	0.22	0.25	1.91	0.29
Previous collaboration between OHP and supervisor	-0.35*	-2.26	-0.26	-0.20	-1.12	-0.15
Self-efficacy t0-t1 difference	0.43*	2.71	0.32	0.38*	2.09	0.29
Followed course in last 5 years on topic	-0.04	-0.19	-0.02	-0.53*	-2.40	-0.38
Being assessed on sick leave number	-0.44*	-2.68	-0.33	-0.28	-1.34	-0.20
Dealt with CMHP personally	0.32	1.97	0.24	0.45*	2.26	0.34

\* significant at p=.05

### 3.4. Research question 3: how and why does the intervention work?

Derived from the qualitative data, we retrieved five mechanisms that deemed evident for strengthening supervisory support according to the participants. We explain these mechanisms and enabling circumstances that led to the outcomes of the SAW-SG intervention, operated on interpersonal and individual supervisor level. We also present two overall enabling conditional circumstances to the intervention. The presented mechanisms, triggered by specific and overall conditional circumstances are depicted in figure 3.

Mechanisms on interpersonal level

#### 3.4.1. Expertise, trust and accessibility of OHP

Supervisors reported that because of the OHP's **Expertise** (e.g. on mental health and ways to stay at work), supervisors received useful insights and advices on their cases, increasing their skills and trust in their role and interventions towards the employee. They appreciated that OHPs acted empathic and independent, using a non-judgmental approach during the coaching sessions. Supervisors who previously collaborated with the OHP, and supervisors who received tailored advice to the work context had deeper discussions with OHP on their supportive behaviour, because they could **Trust** the OHP and speak out freely. Also, supervisors appreciated the opportunity to participate individually or in small groups and being given allocated time to sit and reflect during the intervention. Because of the **Accessibility** of the OHP, initiated by this intervention set-up, interaction between supervisors and OHPs was intensified. For the supervisors who felt this low key access to external occupational health services or had the OHP internally available, it was easier to ask for support or advice.

“I realized that when I need help on a difficult case, the OHP is the expert to advise me accordingly, while before I would ask HR.”

#### 3.4.2. Social support from co-supervisors

Supervisors were very motivated to discuss about Staying at work despite CMHP with the OHP as well as with co-supervisors. They realized during the coaching sessions to not be the only one facing dilemma's with employees with CMHP. This led to the unintended outcome of intensified interaction among them. Supervisors reported to experience **Social support from co-supervisors** as helpful, but only if there was no hierarchy among the members in the group sessions, and if they had the time and scheduled moments to reflect on cases and their own supportive behaviour and activities.

“I feel that after the project, we should repeat what we discussed during this intervention in regular management meetings.”

Mechanisms on the individual level

#### *3.4.3. Willingness to learn*

Supervisors mentioned that it was necessary, to some extent, to be **Willing to learn** and develop yourself in this theme, in order to increase supervisor support, or develop skills and self-efficacy. They needed at least some interest in mental well-being. For those supervisors who dealt with CMHP before (this could be in their personal life, education or work as supervisor) or for those who were yet aware of the urgency and the importance of their role, it was easier to reflect on their supportive behaviour. This seemed to lead to increases in skills and supportive behaviour through the coaching or guideline.

#### *3.4.4. Self-efficacy*

Supervisors reported the importance of previous success stories with employees who continued to work despite mental health issues, because then they felt confident (**Self-efficacy**) in themselves to be able to promote work participation through their support. In this, they reported it helped to know their own strengths and weaknesses and their used leadership style, e.g. from courses in the past on this topic or through this intervention. Participating to the intervention also increased self-efficacy on how to converse with employees, also while struggling at work.

“Now I can trust that I can handle these difficult conversations because I saw the benefits of using the guideline, in myself and in the response of employees.”

#### *3.4.5. Action planning*

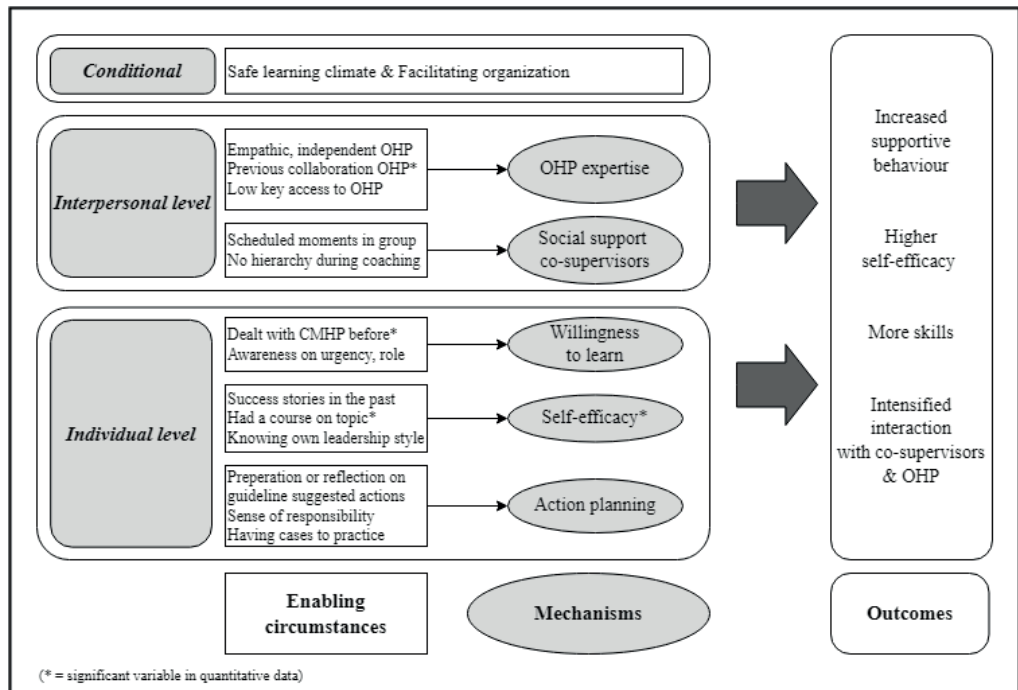
Lastly, many participants addressed that they gained more skills on how to support employees, because this intervention triggered **Action planning**, that is a strategy to identify steps towards a goal. Namely, by preparing or reflecting on their activities and by actively considering concrete alternatives throughout the process. Especially if supervisors could directly apply what they learned during the intervention to a current case, and felt the responsibility to improve their role, it increased supportive behaviour. This was easier when not being occupied by a high caseload or span of control.

“I scanned the guideline before I shared my concerns with the employee, to see what I could do differently.”

### 3.4.6. Conditional circumstances

Overall, in order to bring about the reported changes in supportive behaviour of supervisors, a safe learning climate and a facilitating organisation were conditional circumstances. Regarding a safe learning climate, participants expressed the importance that the organization promoted trial and error without assessment or judgement on (operational) performance indicators of supervisors or sick leave numbers. Concerning a facilitating organisation, participants reported that they need to be supported by senior management in terms of time and access to occupational health expertise. Also, if the intervention was tailored to their own organization, it was easier to apply the suggested actions and learnings during the intervention.

Figure 3. Mechanisms on how and why the intervention works, including enabling circumstances



#### **4. Discussion**

Using a mixed methods realist design, this study aimed to unravel whether, how, for whom and under which circumstances the SAW-SG intervention strengthens supervisory support, to promote work participation of employees struggling with CMHP. We found that for supervisors who participated in the intervention, supervisors' supportive behaviour, self-efficacy and skills to support employees with CMHP increased over time compared to baseline. These changes occurred due to intensified interactions between supervisors and OHP during the intervention, that triggered the use of occupational health expertise and social support among co-supervisors. Supervisor's self-efficacy seemed an important factor, acting as an outcome and a mechanism at the same time. Conditional circumstances to strengthen supportive behaviour is a facilitating organization (i.e. by being given time and structural, low-key access to ask for advice from an OHP), in a safe learning climate. We discuss the most important findings of each research question, followed by implications for future research and practice and the strengths and limitations of this study.

##### ***4.1. The impact of the intervention***

Our first research question addressed whether the intervention works, in order to strengthen supervisor's supportive behaviour. In line with the Integrated Model of Behaviour prediction, supervisor's supportive behaviour could be predicted by the intention to perform the suggestions given in the online guideline and coaching sessions (28). In turn, intention is determined by attitude, social influence, self-efficacy and skills. In our study, single items for intention, attitude and social influence were already high at baseline, therefore limiting the potential for further increase over time. Participants in this study deemed quite experienced at baseline. However, supervisors were motivated to develop themselves on this topic, reflected also by the finding from the qualitative interview that willingness to learn was found as an important mechanism. This may be because supervisors had voluntarily decided to participate in this evaluation study, as found in a similar study on facilitating employees' return to work (46). Next, the results of the study indicate that supportive behaviour only increased significantly post follow-up, after 6 months compared to baseline, and not directly after the intervention (at 3 months). Whereas skills and self-efficacy showed direct significant increases post intervention. A possible explanation of such a 'delayed' behavioural change, based on the qualitative data, may be that new behaviour needs more time to consolidate (47). Supervisors expressed to appreciate the monthly sessions in which the intervention offered practical suggested actions that helped them out in current cases of team members struggling with CMHP, but they could reflect on previous cases also. However, they preferred a longer coaching period to consolidate new approaches, demonstrating their willingness to learn but also implying that acquiring these skills takes (more) time. These findings are in line with Integrated model of behaviour prediction, proposing that determinants such as motivation, self-efficacy or skills are often targeted as mediators for behavioural change (28).

##### ***4.2. The importance of the organizational context***

We particularly addressed the context by investigating personal factors and organizational factors in the second research question, gaining insights under which circumstances make this intervention work. As supervisor's supportive behaviour does not occur in a vacuum, the organizational context plays an important role in implementation and evaluation of workplace interventions (48, 49). Despite this emphasis, contextual factors are often less likely to be considered in theories of behavioural change (47). Our results provide guidance to which contextual and personal factors to focus on in such interventions, for example whether the supervisor has previously worked with the OHP or has dealt with mental health issues in their personal life. Also, a safe learning climate and being facilitated by the organization in time and access to OHP were conditional circumstances that strengthen supportive behaviour of supervisors, emphasizing that the organisational context is crucial for effective workplace interventions (50). These findings underscore that it is not only the employee who needs to be supported by the organisation, often represented by the supervisor, to stay at work, but the supervisors themselves also need support from their organization to increase their capacity on providing the accurate support.

Our intervention addressed the work context as defined for organizational intervention processes, using four key principles (49). Regarding the first principle, tailoring the intervention to the organizational context, we provided OHPs with a basic, relatively flexible, implementation protocol and training. Flexibility allowed them to implement the intervention in a way that it would fit in the organisation (e.g. individually or in group, or the number of supervisors being coached). In line with two other principles (participation and communication), we developed the implementation and evaluation activities through a participatory approach and offered materials for OHPs to communicate actively about those activities. This has found to be successful in other studies (28, 51, 52). Lastly, regarding the fourth principle of managerial support, supervisors needed to feel and be supported by their own (staff) managers. This was ensured in our intervention by selecting organizations having support from senior management adopting this intervention. Having developed and implemented our intervention in a way that meets those four principles may further explain why the intervention process in this study was successful (15, 49, 52).

### ***4.3. Interpersonal and individual mechanisms triggering behavioural change***

Five mechanisms on the interpersonal and the individual level were retrieved on how and what makes the intervention work (31). In conclusion, our study confirms that mechanisms are not only on an individual level but also on interpersonal and collective level related to managerial behaviour and organisational culture (53). This multi-level interpretation of findings is supported by previous realist research in the way that mechanisms, circumstances and outcomes operate at different levels (54) and interact with each other (3).

Interpersonal dynamics seem crucial in the way supervisory support is experienced. This applies to the dynamics between the employees with CMHP and their supervisors, but also to the supervisors and their interaction with other stakeholders in the organisation. Regarding the dynamics between supervisors and OHPs, our study found that this interaction during the coaching sessions increased. Supervisors gained skills and trust due to the expertise of the OHP and their independent

and empathic role, especially when they had positive experiences in their previous collaborations. This may explain the significance of the covariate reflecting previous collaboration between OHP and supervisor, because of the trustful working relationship (28). Establishing and maintaining a trusting relationship between supervisor and OHP has also shown to be important for successful return to work trajectories (39). The SAW-SG intervention seems to nurture relationships among workplace stakeholders, resulting into more personalized and continuous assistance that might be useful in prevention as well (55). Moreover, the mechanism on social support shows how learning in small groups during this intervention led to a collective learning process among co-supervisors, in a way that supervisors supported each other to deal with employees with CMHP. This concept, also known as collective efficacy (56), could be triggered because supervisors from the same organization had the chance to define their shared beliefs and capabilities to organize and execute the courses of activities (57). While a previous study showed similar results for employees work outcomes, our findings suggest that through developing collective efficacy among supervisors, positive employee work outcomes (i.e. staying at work) can be promoted by providing co-supervisors with emotional support (56).

On the individual level, we identified the following mechanisms triggering change in supervisor's supportive behaviour: willingness to learn, self-efficacy and action planning. Self-efficacy was proposed as a targeted outcome, being an important predictor of behaviour. Among all primary and secondary outcomes, we observed the largest change over time in self-efficacy. Not only as an outcome, self-efficacy was revealed as an important mechanism leading to increased supportive behaviour in our qualitative findings, referring to a 'ripple effect' (58). Self-efficacy indeed appeared to be a significant predictor of supportive behaviour among supervisors on how to support employees with CMD, suggesting that the supervisor's confidence in conversing about mental health issues is positively correlated with their supportive behaviour (38, 59, 60). This finding is in line with the self-efficacy theory, which suggests that self-confidence is one of the key predictors of behaviour change (61). Based on this theory, it can be expected that supervisors with high levels of self-efficacy set more challenging goals for themselves, they invest more to meet their goals, they persist longer, and in contrast, supervisors with low self-efficacy are less successful in their attempts to the suggested supportive behaviour or actions in the guideline (62). We also suggest that the increase in self-efficacy may be attributable to the multifaceted design of the intervention, in which supervisors could learn through feedback loops and by directly applying their action plans (38). It seems likely that an increase in confidence in our intervention was achieved by going beyond knowledge-based training to supervisors. The coaching sessions led to practical skills in having difficult conversations and allowing them space and time to practice these techniques with the right expert (OHP), using concrete action plans (46, 59).

#### ***4.4. Implications for future research***

Our study contributes to the literature by exploring several covariates regarding personal, organizational and interventional factors quantitatively and qualitatively, to better understand how the



intervention works. Our findings expose that the same intervention might work through a number of different mechanisms at the same time, each in specific circumstances (51, 63). In this, our study findings respond to the call to further develop and refine methods to assess the causal explanations between contexts, mechanisms and outcomes in workplace interventions (31, 44). Regarding the quantitative data, only a few covariates were significantly correlated and contributed to the primary outcome, while we explored thoroughly from the start of the intervention how and under which circumstances such intervention could work (referring to the initial program theory, Appendix 1). We found that the working mechanisms leading to change may be either latent or unobservable and therefore seem harder to quantify in covariates or measurable outcomes, but we were able to identify those using realist interviewing. Therefore, our study demonstrates that evaluating what makes an intervention work using qualitative methods leads to more realistic insights from what actually happened during intervention implementation. More qualitative research is needed to unpack mechanisms and circumstances that lead to the outcomes in workplace interventions.

In the present study, we choose to evaluate outcomes that were proximal to the adherence of the intervention, namely supportive behaviour and its behavioural determinants, self-reported by supervisors. It would be highly interesting to gain insights on the impact of this intervention on more distal outcomes, such as individual outcomes (i.e. the employee's experience of supervisory support and work outcomes such as sick leave numbers) and organisational outcomes (i.e. on mental health literacy of senior and middle management or organizational climate). In a next step, a larger evaluation study could include both proximal and distal outcome measures. Also, we recommend a future study to test findings from this study among a more diverse sample in sector and level of experience in dealing with mental health issues, in preferably a waiting list design.

#### ***4.5. Implications for practice***

This study demonstrated that through a multifaceted intervention, comprising of an online guideline and coaching sessions, supportive behaviour by supervisors can be strengthened. From an organizational perspective, the SAW-SG intervention can be easily implemented on a small scale, under the condition that supervisors are facilitated by senior management, in the organization where they feel safe to try (and fail). As our study was conducted during the COVID-19 pandemic, sessions were held partly online. An advantage was to easily plan the coaching sessions, especially with a small group of supervisors in one organization from different departments or locations. A disadvantage was that coaching seemed challenging when not yet knowing the supervisor or not being able to 'read' all non-verbal signals due to the virtual environment. We found that the intervention can be implemented face to face as well as online, which seems beneficial to its implementation. We expect that with allocated time and lower caseloads for supervisors, employees with CMHP will be enabled to keep working and perform well at work, resulting in better work outcomes or the prevention of long term sick leave.

Additionally, our study showed that it is valuable to create a low-key route for supervisors to consult an OHP, also in the phase of prevention. Supervisors valued the expertise and action-oriented approach of OHPs, increasing the likelihood to signal and act early and to discuss job

accommodations or other interventions with the employee. For some OHPs who implemented this intervention, it was the first time to discuss with supervisors about employees they are concerned about, in this preventive stage. As a result, OHPs had different conversations than they usually have in return to work trajectories. Key to participatory interventions is an open learning culture, in which supervisors and OHPs are co-learners in an empowerment process (64, 65). In our intervention, we recognize a parallel learning process of supervisors and OHPs. OHPs gained new insights into what is going on in the particular team or organization before the employee reports ill. This may also benefit return to work trajectories since OHPs are better informed about the work context, to match employee's capabilities with work and the work environment.

Although the intervention aimed to change behaviour of individual supervisors, interventions as such may promote the inclusivity of employees with CMHP in workplaces on a larger organizational level (66). In our observations, this occurred by introducing such intervention to HRM and senior management which increased awareness on the topic. Likewise, supervisors and OHPs acted as project champions, making plans for sustainability and scalability of this intervention, e.g. by alerting other supervisors and teams or providing internal presentations and webinars (32, 67).

#### ***4.6. Strengths and limitations***

First, a major strength of this study is the high level of fidelity to the intervention. All OHPs completed the intervention. For the supervisors, the response rates of the questionnaire were 71 percent after the intervention and 60 percent at follow-up. Second, in line with the realist approach, we allowed or a variety of settings and implementation strategies. In this way, OHPs could tailor the novel intervention to their own organization and setting. The mixed methods realist design provided detailed insights into which circumstances triggered certain mechanisms. The way mechanisms bring about changes that occur on various levels and through several mechanisms at the same time led to more in-depth and more realistic insights on the use and impact of the intervention. Third, the quantitative data were supplemented by interviews with more than one fourth of the study population who completed the intervention (15/56 participants), which provided a comprehensive picture of the impact of the intervention.

A number of limitations need to be mentioned. First, our method of recruiting supervisors (OHPs who selected and invited the organisation and its supervisors) may have led to selection bias. Because of the voluntary participation we could explain the relatively high baseline scores, especially on supervisors' exposure to CMHP and positive attitude and intention regarding the topic of this intervention. This was also found in a previous study, where the influence of transformative leadership was mediated through the supervisors' positive attitudes and actions towards the intervention (68). Second, the questionnaires addressed items regarding the outcomes that were in line with the guideline's themes. This may have led to socially desirable answers in the questionnaires throughout the intervention period. Also, it may be that supervisors reported certain behaviour due to their awareness of being observed, referring to the Hawthorn effect (69). However, we did not observe this during the interview held on the impact of this intervention. Alternative ways of data collection could be explored, i.e. the use of journaling or observations. Lastly, the study population reflected mostly

the public sector and a high proportion of supervisors working in the health care sector. As a result, the scope of this study to only the mechanisms that bring the intended outcomes in those specific contexts. More explorative analysis in other contexts might have illuminated other complexities of the implementation process and its impact, as reported before in the rather new mixed methods evaluation design (51). Regardless of these limitations, the results of our study are useful in developing interventions to strengthen supervisory support, and as such, positively contribute to employees' work participation while struggling with CMHP.

#### **4.7. Conclusions**

Using a mixed-methods realist approach, this study shows that after participating to a workplace intervention, supervisors' behaviour, self-efficacy and skills to support employees with CMHP increased compared to baseline. On the individual level, self-efficacy seemed an important outcome and mechanism as well, besides willingness to learn and action planning. On the interpersonal level, the intervention intensified interactions between supervisors and OHP and among co-supervisors, because of trust and low-key access to occupational health expertise and experienced social support. To strengthen supervisory support, conditional circumstances triggering those mechanisms were allocated time and structural, low-key access to ask for advice from an OHP, in a safe learning climate. These findings may encourage employers to invest into supportive behaviour of supervisors, who have an important role to promote work participation for employees struggling with CMHP. Preventive workplace interventions that are multifaceted and action-oriented towards the capacity of supervisors seem a way to enable employees with CMHP to (partly) keep working and perform well in their jobs. These findings may prove useful for researchers, policy makers and practitioners who must weigh the costs and benefits of preventive interventions targeted at supervisors, in order to create mentally healthy workplaces.

## **Appendix 1. Initial program theory supervisors**

Initial program theory

*If* The intervention (guideline and coaching sessions) is implemented in circumstances where there is/are:

A safe culture for sparring with OHP and co-supervisors that is barrier-free to seek help  
Supervisors and OHP have collaborated in the past  
Learning climate where the supervisor is allowed to make mistakes and learn from it /trial and error  
Not being assessed on sick leave numbers in job performance as supervisor  
Supervisor has pre-existing interest in mental wellbeing  
Supervisor is willing to learn and grow in leadership skills  
Supportive, easily available information on theme (supervisors have limited time) (circumstances)

*Then* Supervisors are likely to strengthen their supportive behavior towards employees with CMHP and their self-efficacy, skills and awareness (could be positive attitude, intention or social idea) (outcomes)

*Because*

It makes them to reflect on their own approach, skills and pitfalls/shortcomings through self-assessment when studying the guideline and through coaching sessions  
They can reach out to the OHP expert directly, especially when they had positive experience with their consultation in the past or when they experience a good rapport, reflected into a trustful relationship with OHP  
Supervisors feel supported not being alone in this, sharing experiences with the expert and co-supervisors, that gives room for discussion but with a systematic, evidence-based tool (the guideline)  
They gain insights into their own performance that gives confirmation or improvements (self-efficacy) and they also know what to do about it (practical skills) (mechanisms)

## Appendix 2 Primary, secondary outcomes and covariate measures of the questionnaire

Outcome measure	Scale and items*	Response options	Reliability at T0 (Cronbach's $\alpha$ )	Operationalization	Code name SPSS data file
<b>Behavior and behavioral determinants</b>					
<b>Primary outcome measure</b>					
Supportive behavior <sup>a</sup>	During the last 3 months: I timely signal psychological complaints. I talk with employees who face psychological complaints. I stimulate self-regulation in employees. The employee and I explore job accommodations to stay at work. I regularly contact employees with CMD. I ask for help from occupational health professionals to promote work participation.	Scale 1 (totally agree) - 5 (totally not agree) Likert scale	$\alpha=0.813$	Mean of 6 items for behaviour regarding the use of the guideline	GDHvGEMt0 GDHvGEMt1 GDHvGEMt2
<b>Secondary outcome measures</b>					
Self-Efficacy <sup>b</sup>	During the last 3 months: I feel confident to support employees with CMHP I trust my ability to timely signal psychological complaints I feel confident to talk with employees who face psychological complaints and reduced work performance I trust my ability to stimulate autonomy in employees, also when they face psychological complaints. I feel confident to think about solutions so that employees with CMHP can stay at work I feel confident to jointly find solutions so employees with CMHP can stay at work. SEAlg6 . SEHv1 SEHv2c SEHv3C SEHv4O SEHv4	Scale 1 (totally agree) - 5 (totally not agree) Likert scale	$\alpha=0.837$	Mean of 6 items for self-efficacy regarding the use of the guideline	SEGEMt0 SEGEMt1 SEGEMt2
Skills	Over the last 3 months I am able to discuss changing behaviour due to psychological complaints with the employee I am able to stimulate my employee towards autonomy and sense of responsibility I have the skills to adequately support employees with CMHP to stay at work I have the skills that are required to jointly find solutions with the employee facing CMHP on how to stay at work	Scale 1 (totally agree) - 5 (totally not agree) Likert	$\alpha=0.775$	Means of 4 items for skills reflected in the themes of the guideline	SKGEMt0 SKGEMt1 SKGEMt2
Intention <sup>c</sup>	I am willing to support employees with CMHP, so they can stay at work I am planning to support employees with CMHP to my best capacity, so they can stay at work	Scale 1 (totally agree) - 5 (totally not agree) Likert	$\alpha=0.716$	Mean of 2 items for intention to support employees with CMHP	INTGEMt0 INTGEMt1 INTGEMt2
Attitude <sup>b</sup>	(general) As a supervisor, I feel responsible to support the employee with psychological complaints, so they can stay at work (general) An employee who is at risk of sickness absence,	Scale 1 (totally agree) - 5 (totally not agree) Likert	Total 4 items: $\alpha=0.368$ General items (2): $\alpha=0.462$ Guideline specific items (2): $\alpha=0.347$ .	Attitude towards mental health in the workplace in general and guideline specific	Single item used: AttHv3

Supporting employees with common mental health problems at work: a realist approach

	can count on support of his/her supervisor (guideline specific) I find it important to talk with employee about the work performance and behavior that is possibly affected by psychological complaints (guideline specific) I find it important to stimulate autonomy and a sense of responsibility in employees who face psychological complaints.				
Social influence <sup>b</sup>	My organization is expecting me to talk with employees who face psychological complaints, once changes occur in the workplace My organization stimulates me when employees are at risk of sickness absence, to find solutions so employees with CMHP can (partly) stay at work	Scale 1 (totally agree) - 5 (totally not agree) Likert	$\alpha=0.603$	Mean of 2 items for social influence regarding themes in the guideline	Single item used: SIOrghv4
Personal factors					
Age	18-29 years 30-39 years 40-49 years 50-59 years 60-67 years				alg1
Gender (sector.	Female Male				alg2dum
size of organization	Health care Public administration Business services Other: agriculture, industry, construction, trade, transport, hospitality, IT, education, culture sports, recreation				DUMSector4cat
Education level of supervised employees:	Small (10 - 49) Medium (50 - 249) Large (250 and more)				Alg4
Supervisory experience, in years	Low Medium High				Alg6DUMOPLMW
Being assessed on sick leave	0-1 2-5 6-10 >10				Alg8
Dealt with CMHP at work (t0)	0 = no 1 = yes				DUMBEOORDVERZ UIM:
Dealt with CMHP personally (t0)	Not (sometimes, rarely, never) Yes (often, regularly)				DUMPSYCHKLWER KSITUATIE
Followed a course in last 5 year about	Not (rarely, never) Yes (often, regularly, sometimes)				DUMPSYCHKLZELF OMG
	No Yes				Impl4CURSUSDUM

topic (at t1)					
Workload as occupational risk (y/n)	No Yes				DUMWERKDRUK
<b>Environmental factors</b>					
<b>Organisational support<sup>c</sup></b>	The organization supports me as a supervisor to discuss mental health with my employees. My organization provides me with sufficient resources to keep my employees with psychological complaints at work. My organization recognizes co-responsibility for promoting stay at work among its employees with psychological complaints. People within my team demonstrate a need for attention regarding mental health. Within my team there is appreciation for supporting employees with psychological complaints	Scale 1 (totally agree) - 5 (totally not agree) Likert scale. Dummie variable: neutral 1 – totally agree 3	0.745	Perception of the organizational support they received and to evaluate their own role as supervisor regarding supporting employees to stay at work	OrgStGEMDUMt0 OrgStGEMDUMt2
Learning climate <sup>d</sup>	3 items of 6 items Facilitation learning climate My organization provides appealing educational facilities (resources) My organization provides sufficient resources to develop my competences In my organization, one receives the trainings he/she needs Error avoidance In my organization, one is afraid to admit mistakes In my organization, employees do not dare to discuss mistakes In my organization, employees are anxious to openly discuss work-related problems	Scale 1 (totally agree) - 5 (totally not agree) Likert scale	Facilitation: 0.830 Error avoidance: 0.670	Means of 3 items for each dimension. Facilitation learning climate: refer to "support of", "facilitation of", and "opportunities for" certain practices. Error avoidance: provision of tolerance for learning-related errors	LKOrgGEM LKEmpIGEM
<b>Intervention factors</b>					
Type of coaching	Coaching received in group/individually	1 = in group 2 = Individually 3 = Both			GroepInd
Collaboration with OPH in past	<i>OHP and supervisor collaborated in past</i>	1 = No 2 = Yes			Impl1DUMSAMENG
OHP knows the case	OHP knows the employee whom the supervisor ask for in the case	0 = No 1 = Yes			DUMEXPERTMWKENT
Sparring with OHP	<i>Frequency sparring with an OHP</i>	1 = Seldom or never 2 = Regularly 3 = Often or always			FREQSPARDUM
Version guideline website or pdf	Guideline version used Website, pdf or both	0 = website 1 = pdf 2 = both			DUMVERSIEHANDR

\*Questions were derived from validated questionnaires and modified to fit the target group.

<sup>a</sup> based on outcome indicators, adjusted from ketelaar et al. and Corbiere BAKES.

<sup>b</sup> adjusted from Ketelaar et al

<sup>c</sup> adjusted from hendriksen et al.

<sup>d</sup>Learning climate scale, Nikolova et al., translated to Dutch Noeverman, orgineel: facilitation ( $\alpha = .89$ ) and error avoidance ( $\alpha = .75$ ),



### Appendix 3 Additional results from quantitative data

Descriptive statistics, t-test of all items and correlation matrices

Table 1. Descriptive statistics of primary and secondary outcomes per scale, range of each scale is 1-5

	n	Mean	Std. Deviation	Std. Error
Behavior t0	92	4,07	0,746	0,078
Behavior t1	65	4,22	0,570	0,071
Behavior t2	56	4,43	0,459	0,061
Self-efficacy t0	92	3,93	0,573	0,060
Self-efficacy t1	63	4,34	0,495	0,062
Self-efficacy t2	56	4,35	0,519	0,069
Skills t0	92	3,85	0,583	0,061
Skills t1	63	4,21	0,479	0,060
Skills t2	56	4,32	0,441	0,059
Intention t0	92	4,84	0,341	0,036
Intention t1	63	4,83	0,372	0,047
Intention t2	56	4,88	0,330	0,044
Attitude towards stimulation of autonomy t0	92	4,67	0,557	0,058
Attitude towards stimulation of autonomy t1	63	4,81	0,396	0,050
Attitude towards stimulation of autonomy t2	56	4,84	0,371	0,050
Social influence to find solutions together with employee t0	92	4,17	0,779	0,081
Social influence to find solutions together with employee t1	63	4,49	0,738	0,093
Social influence to find solutions together with employee t2	56	4,50	0,661	0,088

Table 2. paired t-test of primary and secondary outcomes

Baseline -post intervention at 3 months	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Behavior t0 t1 (GDHvVerscht0t1)	0,149	0,676	0,084	-0,019	0,316	1,773	64	0,081
Self efficacy t0 t1 (SEVerscht0t1)	0,360	0,498	0,063	0,234	0,485	5,730	62	0,000
Skills t0GEM SKt1 (SKVerscht0t1)	0,294	0,434	0,055	0,184	0,403	5,367	62	0,000
Intention t0 - t1 (IntVerscht0t1)	0,008	0,416	0,052	-0,097	0,113	0,151	62	0,880
Attitude hv3 t0 – t1 eigen regie stimuleren (AttHv3Verscht0t1)	0,016	0,458	0,058	-0,099	0,131	0,275	62	0,784
Social influence t0- t1 hv 4 samen oplossingen zoeken (SIOrgHv4Verscht0t1)	0,254	0,915	0,115	0,023	0,484	2,202	62	0,031
<b>Baseline -post follow up at 6 months</b>								
Behavior t0-t2 (GDHvVerscht0t2)	0,333	0,627	0,084	0,165	0,501	3,979	55	0,000
Self efficacy t0-t2 (SEVerscht0t2)	0,420	0,537	0,072	0,276	0,564	5,843	55	0,000
Skills t0 – t2 (SKVerscht0t2)	0,406	0,480	0,064	0,278	0,535	6,328	55	0,000
Intention t0 – t2 (IntVerscht0t1)	0,071	0,398	0,053	-0,035	0,178	1,343	55	0,185
Attitude hv3 t0 – t2 (AttHv3Verscht0t2)	0,036	0,571	0,076	-0,117	0,189	0,468	55	0,642
Social influence hv 4 t0-t2 samen oplossingen zoeken (SIOrgHv4Verscht0t2)	0,339	0,880	0,118	0,104	0,575	2,887	55	0,006

Outcomes from correlations theoretical model (at t0).

Correlations between covariates and primary outcome of behaviour and secondary outcome of self-efficacy.

Table 3. Personal factors

		Primary outcomes			
		11 Behavior <sup>a</sup> t0-t1	2 Behavior t0-t22	3 Self efficacy t0-t1 3	4 Self efficacy t0- t24
<i>Age (alg1)</i>	Pearson Correlation	-0,142	-0,093	0,113	0,223
	Sig. (2-tailed)	0,259	0,497	0,379	0,098
	N	65	56	63	56
<i>Female (alg2dum)</i>	Pearson Correlation	-0,051	0,069	-0,023	0,010
	Sig. (2-tailed)	0,687	0,612	0,857	0,941
	N	65	56	63	56
<i>Sector (dumsector4cat)</i>	Pearson Correlation	0,013	-0,067	0,140	0,179
	Sig. (2-tailed)	0,917	0,624	0,272	0,188
	N	65	56	63	56
<i>Size of organization (total number of employees)(alg4)</i>	Pearson Correlation	-0,016	0,119	0,289*	0,203
	Sig. (2-tailed)	0,898	0,386	0,023	0,137
	N	64	55	62	55
<i>Educational level of supervised employees (alg6dum)</i>	Pearson Correlation	0,164	0,056	0,045	0,029
	Sig. (2-tailed)	0,191	0,680	0,727	0,834
	N	65	56	63	56
<i>Supervisory experience, in years (alg8)</i>	Pearson Correlation	0,097	-0,064	0,111	0,095
	Sig. (2-tailed)	0,443	0,639	0,384	0,488
	N	65	56	63	56
<i>Being assessed on sick leave ratio/number (DUMBEOORDVERZUIM)</i>	Pearson Correlation	-0,216	-0,136	0,028	-0,115
	Sig. (2-tailed)	0,083	0,316	0,828	0,400
	N	65	56	63	56
<i>Dealt with CMHP personally (t0) (DUMPSYCHKLZELFOMG)</i>	Pearson Correlation	0,148	0,134	-0,192	-0,318*
	Sig. (2-tailed)	0,240	0,324	0,132	0,017
	N	65	56	63	56
<i>Dealt with CMHP @work (t0) (DUMPSYCHKLWERKOMG)</i>	Pearson Correlation	-0,178	-0,253	-0,002	-0,024
	Sig. (2-tailed)	0,156	0,060	0,987	0,862
	N	65	56	63	56
<i>Had a course in last 5 year about topic (at t1) (Impl4CURSUSDUM)</i>	Pearson Correlation	0,012	-0,252	-0,019	-0,020
	Sig. (2-tailed)	0,923	0,081	0,883	0,891
	N	65	49	63	49

Table 4. Environmental factors

		Primary outcomes			
		11 Behavior <sup>a</sup> t0-t1	2 Behavior t0-t22	3 Self efficacy t0-t1 3	4 Self efficacy t0- t24
<i>Organizational support (OrgStGEMDUMt0)</i>	Pearson Correlation	-0,224	-0,169	-0,162	-0,206
	Sig. (2-tailed)	0,073	0,212	0,204	0,129
	N	65	56	63	56
<i>Learning climate: organization facilitates learning (at t1, n=65) (LKOrgGEM)</i>	Pearson Correlation	-0,087	-0,201	0,287*	0,042
	Sig. (2-tailed)	0,489	0,165	0,022	0,772
	N	65	49	63	49
<i>Learning climate: error avoidance (at t1, n=65) (LKEmpIGEM)</i>	Pearson Correlation	0,096	0,051	-0,106	0,010
	Sig. (2-tailed)	0,445	0,729	0,408	0,947
	N	65	49	63	49
<i>Workload as occupational risk (y/n) (DUMWERKDRUK)</i>	Pearson Correlation	-0,101	-0,164	0,155	-0,157
	Sig. (2-tailed)	0,422	0,226	0,225	0,247
	N	65	56	63	56

Table 5. Intervention factors

		Primary outcomes			
		1 Behavior <sup>a</sup> t0-t1	2 Behavior t0-t2	3 Self efficacy t0-t1 3	4 Self efficacy t0- t24
OHP and SV collaborated in past ( <i>Impl1DUMSameng</i> ):	Pearson Correlation	0,333**	0,145	0,106	-0,068
	Sig. (2-tailed)	0,007	0,288	0,408	0,618
	N	65	56	63	56
Frequently sparring with an OHP/colleague ( <i>Freqspardum</i> )	Pearson Correlation	-0,016	0,024	0,006	0,158
	Sig. (2-tailed)	0,896	0,862	0,966	0,244
	N	65	56	63	56
Coaching received in group or individually ( <i>GroepInd</i> )	Pearson Correlation	-0,116	0,000	-0,074	-0,051
	Sig. (2-tailed)	0,357	1,000	0,563	0,707
	N	65	56	63	56
Guideline version used ( <i>DUMVersieHandr</i> ) Website pdf of beide	Pearson Correlation	0,073	0,122	0,029	0,112
	Sig. (2-tailed)	0,584	0,425	0,826	0,463
	N	58	45	58	45
OHP knows the case ( <i>DUMEXPERTMWKENT</i> )	Pearson Correlation	-0,144	0,022	0,090	0,073
	Sig. (2-tailed)	0,253	0,879	0,482	0,619
	N	65	49	63	49

## Appendix 4 Used syntax

\* Encoding: UTF-8.

DATASET ACTIVATE DataSet1.

FACTOR

```
/VARIABLES GDHv1t0 GDHv2t0 GDHv3t0 GDHv4t0 GDHv5Ht0 GDHv5t0
/MISSING LISTWISE
/ANALYSIS GDHv1t0 GDHv2t0 GDHv3t0 GDHv4t0 GDHv5Ht0 GDHv5t0
/PRINT INITIAL CORRELATION KMO REPR AIC EXTRACTION ROTATION
/FORMAT SORT BLANK(.3)
/PLOT EIGEN ROTATION
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/SAVE REG(ALL)
/METHOD=CORRELATION.
```

BOOTSTRAP

```
/SAMPLING METHOD=SIMPLE
/VARIABLES INPUT=GDHvGEMt0 GDHvGEMt1
/CRITERIA CILEVEL=95 CITYPE=PERCENTILE NSAMPLES=1000
/MISSING USERMISSING=EXCLUDE.
```

T-TEST

```
/TESTVAL=0
/MISSING=ANALYSIS
/VARIABLES=GDHvGEMt0 GDHvGEMt1
/ES DISPLAY(TRUE)
/CRITERIA=C(.95).
```

T-TEST PAIRS=GDHvGEMt1 SEGEMt1 SKGEMt1 INTGEMt1 AttHv2t1 AttHv3t1 SIOrgHv4t1 WITH  
GDHvGEMt0 SEGEMt0 SKGEMt0 INTGEMt0 AttHv2t0 AttHv3t0 SIOrgHv4t0 (PAIRED)

```
/ES DISPLAY(TRUE) STANDARDIZER(SD)
/CRITERIA=C(.9500)
/MISSING=ANALYSIS.
```

Syntax regression analyses

Regression plots to check assumptions

DATASET ACTIVATE DataSet1.

STATS REGRESS PLOT YVARS=GDHvVerscht0t2 XVARS=SKVerscht0t2 OrgStGEMDUMt0

LKOrgGEM LKEmpIGEM

Impl1DUMSAMENG

/OPTIONS CATEGORICAL=BARS GROUP=1 BOXPLOTS INDENT=15 YSCALE=75

/FITLINES APPLYTO=TOTAL.

Regression

REGRESSION

```
/DESCRIPTIVES MEAN STDDEV CORR SIG N
```

```
/MISSING LISTWISE
```

```
/STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE ZPP
```

```
/CRITERIA=PIN(.05) POUT(.10)
```

```
/NOORIGIN
```

```
/DEPENDENT GDHvVerscht0t1
```

```
/METHOD=BACKWARD SKVerscht0t1 LKEmpIGEM LKOrgGEM OrgStGEMDUMt0
```

Impl1DUMSAMENG

/METHOD=ENTER DUMSector4cat Impl4CURSUSDUM DUMBEOORDVERZUIM

DUMPSYCHKLWERKSITUATIE

```
/SCATTERPLOT=(*ZRESID ,*ZPRED)
```

```
/RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID)
```

```
/CASEWISE PLOT(ZRESID) OUTLIERS(2)  
/SAVE PRED ZPRED ADJPRED MAHAL COOK LEVER ZRESID DRESID SDRESID SDBETA  
SDFIT.
```

\* Encoding: UTF-8.

Realist informed variables and correlating sec outcomes skills and self eff

Outcome: difference in behaviour between baseline (t0) and post-intervention (t1)

REGRESSION

```
/DESCRIPTIVES MEAN STDDEV CORR SIG N  
/MISSING LISTWISE  
/STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE ZPP  
/CRITERIA=PIN(.05) POUT(.10)  
/NOORIGIN  
/DEPENDENT GDHvVerscht0t1  
/METHOD=BACKWARD LKEmpIGEM Impl1DUMSAMENG SEVerscht0t1 SKVerscht0t1  
/METHOD=ENTER Impl4CURSUSDUM DUMBEOORDVERZUIM DUMPSYCHKLZELFOMG  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID)  
/CASEWISE PLOT(ZRESID) OUTLIERS(2)  
/SAVE PRED ZPRED ADJPRED MAHAL COOK LEVER ZRESID DRESID SDRESID SDBETA  
SDFIT.
```

Outcome: difference in behaviour between baseline (t0) and post follow-up (t2)

REGRESSION

```
/DESCRIPTIVES MEAN STDDEV CORR SIG N  
/MISSING LISTWISE  
/STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE ZPP  
/CRITERIA=PIN(.05) POUT(.10)  
/NOORIGIN  
/DEPENDENT GDHvVerscht0t2  
/METHOD=BACKWARD LKEmpIGEM Impl1DUMSAMENG SEVerscht0t1 SKVerscht0t1  
/METHOD=ENTER Impl4CURSUSDUM DUMBEOORDVERZUIM DUMPSYCHKLZELFOMG  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID)  
/CASEWISE PLOT(ZRESID) OUTLIERS(2)  
/SAVE PRED ZPRED ADJPRED MAHAL COOK LEVER ZRESID DRESID SDRESID SDBETA  
SDFIT.
```

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## Chapter 7

### General discussion

## **General discussion**

The aim of this dissertation was to deepen our understanding on how to effectually promote work participation of employees with common mental health problems (CMHP). Common mental health problems include diagnosed mood, anxiety or stress-related problems as well as self-reported psychological complaints. CMHP are the major cause of sickness absence and diminished work performance and a major challenge in Western countries and economies. Thus far, a main focus in the field of occupational health regarding employees with CMHP has been on sick leave and return to work. Due to the extensive burden of CMHP for society, employers and individual employees, more preventive intervention measures focusing on the promotion of work participation are needed, additional to the research on return to work after sick leave. The employer has an important role in the prevention of occupational health issues. Therefore, we explore how supervisors can support work participation among employees with CMHP.

Finding solutions to complex problems in complex systems is challenging and requires an in-depth understanding of the nature of interventions and their implementation contexts (1). To better inform policy and practice, we chose a more rigorous methodology, that was a realist approach (2). This approach aims to answer the question: What works (outcome), for whom, under which circumstances (context), how and why (mechanisms), to promote work participation. To do so, we used diverse sources of evidence to model the complex causal relationships using context-mechanism-outcome (CMO) configurations (3). This process led to more in-depth insights into the mechanisms of change and under what conditions or contextual factors those could be activated (4).

We carried out the overall aim in a number of steps. The first step was to develop an explanatory framework, providing a better understanding of work participation of employees with CMHP. Chapter 2 presented a protocol study, on using a realist approach to the literature review process of studying work participation among employees with CMHP. Chapter 3 provided the results of the realist review, a robust, systematic synthesis of recent scientific literature on what mechanisms and contextual factors lead to Stay at work and Work performance (outcomes of work participation). Second, we explored the concept of Stay at work from various workplace stakeholders (employees with CMHP, supervisors and occupational health professionals) through a concept mapping study in Chapter 4. The third step was to develop and evaluate a workplace intervention. The intervention mapping study in Chapter 5 presented a novel, behaviour-oriented preventive intervention targeting supervisory support and the experiences of a pre-test. The last study, a realist evaluation in Chapter 6 deepened our understanding on how supervisors can strengthen their support to employees with CMHP and the working mechanisms and contextual factors of the novel workplace intervention 'Stay-at-work Supervisor Guideline'.

In this chapter, we first reflect on the content of our findings. Then, our experience of using realist research will be discussed. The chapter concludes with future research recommendations and implications for practice.

## **1. The importance of prevention: intervening while being at work**

We consider work participation as a phenomenon that contributes to health, wellbeing and recovery, also while employees face mental health problems. Under the right (work) conditions and with tailored support, work contributes to wellbeing and participation of employees with CMHP (5, 6). Considering the large amount of studies on individual treatment included in the realist review (Chapter 3), the current literature still emphasizes interventions targeting the individual employee with CMHP. Mainly by medical and psychological treatment that aims to reduce symptoms, but also by interventions that increase coping skills of the employee. Interestingly, findings in the concept mapping study (Chapter 4) and a few studies in the realist review (Chapter 3) highlight that providing workplace support to employees with CMHP goes beyond individual treatment. To be given time off work for treatment or recovery is one way to support employees with CMHP, however not enough. The employer and employee should explore together what can be done *at work*, so that work could also function as a 'treatment'. This should be done in the phase before sick leave, when symptoms start to influence the employee's work performance or behaviour at work. For example, by exploring short term interventions such as work accommodations, a buddy or coaching while waiting for treatment. We shed light on the importance of (feeling) being supported in the workplace. What in the workplace really enables employees to stay at work lies in the complexity of how personal, interpersonal and workplace factors interact (7). Therefore, we present ways to promote work participation (mechanisms), for whom (workplace stakeholders) and under what circumstances (conditions in the work context).

## **2. How to promote work participation**

Based on the literature review (Chapter 3) and empirical data from stakeholders in the Dutch work setting (Chapter 4), we address important mechanisms and contextual factors that promote work participation among employees with CMHP.

### ***2.1. Support from the supervisor***

Having a supportive supervisor was shown to be an important contextual factor for staying and performing well at work while facing CMHP. Supervisors play a key role in preventing negative work outcomes such as absenteeism or reduced work performance for employees with CMHP (8, 9). For instance, a trustful relationship with the supervisor, with whom the employee can discuss needed support or work accommodations is found to enhance stay at work (Chapter 3). However, in case of CMHP, supervisors lack skills or guidelines on how to support their employees (7, 10, 11). The studies in Chapter 3 and 4 confirmed the lack of awareness by supervisors towards their role in prevention and mental health at work. During the coaching sessions of the novel intervention, evaluated in Chapter 6, supervisors and occupational health professionals exchanged ideas about the role of supervisors in this preventive phase and the given boundaries, e.g. not acting as a therapist towards the employee. This increased insights on the sphere of influence towards the promotion of work participation.

Where the literature (Chapter 3) showed that having a supportive supervisor is important, the concept mapping study (Chapter 4) revealed more specifically what entails supportive behaviour of the supervisor. Features of a supportive supervisor are trust, openness and a proactive, connected and involved attitude. Those reflect mechanisms on the interpersonal level, that appeared highly important to be addressed when strengthening supervisor support. The concept mapping study (Chapter 4) presented behavioural actions of supervisors in a preventive phase. These actions helped us to draft the novel guideline and are in line with a previous study on return to work processes, citing the core question by supervisors: "What can I do for you?" (12). Mechanisms turned on through the novel SAW-SG intervention, as reported in the realist evaluation (Chapter 6), were being more aware of their relationship with employees in general, being willing to learn and having self-efficacy and action plans to support employees accordingly. The findings in this dissertation recommend employers to invest in training on job resources and strengthening support by supervisors.

### ***2.2. Evaluate interpersonal dynamics as a new level***

Current research and practice orient much on a two-folded approach in promoting work participation, by addressing personal factors, and workplace factors (13). Due to a multi-level interpretation of findings, that mechanisms, circumstances and outcomes operate at different levels (14), our studies revealed important mechanisms on the interpersonal level. This level refers to the relationships between individuals that influence interpretation, reasoning, and use of (workplace) resources in social dynamics (14) (Chapter 2). In our studies, interpersonal dynamics were considered crucial in the way supervisory support is experienced (15). This applied to the dynamics between employees with CMHP and their supervisors, but also to supervisors and their interaction with other stakeholders in the organisation. Those mechanisms are often less tangible and therefore harder to capture and evaluate.

We suggest adding the interpersonal dynamics between employee and employer as a third major component, leading to a three-folded approach. This is in line with a recent literature review, showing that interpersonal relationships at work (with colleagues and supervisor) increase the risk of stress-related problems (16). Supervisors and OHPs could address and evaluate mechanisms on the interpersonal level (Chapter 3), such as perceived support, value and respect, trust, and safety (15, 17, 18). Therefore, the SAW-SG intervention targets conversing skills and actions taken by supervisors. Although it is challenging to realize changes in support systems, The SAW-SG intervention made a first step by supporting the interaction between OHP, supervisor and employee (19).

### ***2.3. Focus on capabilities to stay at work***

Based on the protocol study (Chapter 2) and a realist review (Chapter 3), we developed an explanatory framework presenting a set of capabilities on how to enhance employees with CMHP to stay at work (20). The framework is based on the Capability-for-Work model (21). In previous research, the following seven capabilities are hypothesized to be important for sustainable



employability: (i) use of knowledge and skills, (ii) development of knowledge and skills; (iii) involvement in important decisions; (iv) building and maintaining meaningful contacts at work; (v) setting own goals; (vi) having a good income; and (vii) contributing to something valuable. It can be argued that employers should address those capabilities for all employees as a measure of primary prevention (22). The capabilities we found in our study derived from studies regarding work participation of employees who face mental health problems. Those novel capabilities were: a) having meaningful relations and social support at work, b) exerting control over the work, c) evaluating and adjusting the workload, d) experiencing freedom to create opportunities for active coping, e) experiencing better health, increased cognitive functioning and work performance. Those capabilities are about values and resources that keep employees with CMHP to stay at work and give guidance to assess what employees need, in order to do their work despite mental health problems. It could be interesting to further explore whether those five mental health capabilities are additional to the basic set of capabilities on sustainable employability or whether those are a tailored version in case employees face mental health problems. In general, we argue that exploring the employee's capabilities asks for a tailored approach, because what may be a barrier for one employee, can be a resource or capability for the other. Where supervisors are not allowed to ask for the employee's medical condition due to privacy, they may ask the employee about capabilities to work. In this way, we contribute to the ongoing paradigm shift of focusing more on abilities and functioning instead of conditions and limitations (21, 23).

#### **2.4. Stimulate employee's autonomy**

There is a tendency that supervisors or occupational health professionals take over decisions when employees face mental health problems, because a lack of control is a common manifestation of CMHP. Nevertheless, employees with CMHP (Chapter 4) emphasized that they should be acknowledged as any other employee and not being excluded of decision-making processes. They explained they wish to (be enabled to) actively explore and decide on their work or needed work accommodations, referring to the basic need of autonomy in the Self-Determination theory (24). This also refers to the work capability Involvement in important decisions and the capability To exert control in the set of capabilities, as presented above (22).

To stimulate autonomy, supervisors could simply ask employees: "What do you need in order to continue working?", recognizing the employee's capabilities (what the person *can* do), instead of the illness (focused on what the person *cannot* do). Interestingly, no data in the literature (Chapter 3) was found on the element of personal choice in the Capability-for-Work model. To stimulate autonomy is therefore one of the five themes to be addressed by supervisors, presented in the SAW-SG intervention (Chapter 5).

#### **2.5. Occupational health expertise to select work accommodations**

Findings in the realist review (Chapter 3) and the concept mapping study (Chapter 4) stressed on the needed expertise of occupational health professionals (OHPs) to support supervisors who often do not know how to act (25), or hold certain attitudes or beliefs about mental health problems that lead to

unsupportive practices (26). Work and the work context should be matched to the employee's capacity and needs through (timely and temporarily) work- or workplace accommodations, as suggested by the literature in other health conditions also (27-29). We found that timely work accommodations can enable employees to stay at work (30). These work- or workplace accommodations should be tailor-made. The supervisor is the key person to select and agree upon such work accommodations, as found in a study on return to work (31). However, to select effective work accommodations, the intervention mapping study (Chapter 5) showed that supervisors need low-key access to consult an independent occupational health expert. Labour experts are experts to match employee's capacity with work. Those experts also support to clarify the responsibilities of each workplace stakeholder, since employers remain confused about stakeholders' role and responsibility (7, 8).

### **2.6. Provide an organisational safe climate**

We found that an open, safe climate enables employees with CMHP to stay at work. This was also supported by another recent review on work participation among depressed employees (32). In our realist review, we observed that limited empirical data is available on how to create such an open safe climate. Likewise, we found just a few studies on the effect of awareness raising interventions (32). Research appears to be mainly focused on reducing psychosocial risk factors such as work load, as main interventions to combat CMHP at work (16, 33). The SAW-SG intervention shed light on ways to discuss consequences of mental health problems at the workplace. Supervisors participating in our intervention studies (Chapter 5 and 6) reported that the intervention led to more awareness and empathy because they gained new perspectives and confidence that resulted into action plans on how to raise the topic. Especially on the influence of mental health on work and work performance, so that work-related problems were addressed at an early stage. Although we did not study the effect of this intervention on the organisational climate in the participating organisations, supervisors reported to talk more openly about mental health.

A safe workplace, where employees can be authentic (Chapter 4) depends significantly on the experience of the work environments reaction towards mental health problems (34). As long as employers hold negative attitudes (25, 26), the workplace will not be a safe area to open up about mental health and mental health problems. Found in the realist evaluation (Chapter 6), one way to reduce stigma is to increase openness about mental health problems. For this, a safe organisational climate is evident (35). The reaction of colleagues and supervisor towards disclosure and mental issues is of great importance (34). Our intervention may improve positive reactions towards disclosure as it challenges negative attitudes and addresses ways to support employees. And vice versa, positive disclosure experiences may increase mental health literacy of colleagues and supervisors, leading to more "mentally healthy workplaces" (32, 34, 36).

During implementation of the SAW-SG intervention, supervisors mentioned the importance to experience professional autonomy themselves, when trying out the learnings and suggested actions given by the guideline and coaching sessions. For this, a safe learning climate for supervisors, with less focus on the assessment or judgement on (operational) performance indicators such as sick

leave numbers, was essential. This study (Chapter 6) revealed that a safe learning climate can be promoted by supportive senior management and peer support among supervisors, facilitating transfer or training (37). Thus, likewise for supervisors, a safe learning climate and social support is necessary to strengthen supervisory support.

### **3. Reflections on the workplace intervention**

#### ***3.1. Stay at Work Supervisor Guideline (SAW-SG) Intervention***

We developed the SAW-SG intervention, aiming to strengthen supervisor support. As noted by the World Health Organisation, there is a need to identify effective components (on delivery and on content) of manager training how to handle and evaluate mental health in the workplace (38). Based on findings in Chapter 2, 3 and 4, we present the development of a workplace intervention in Chapter 5. In short, the SAW-SG intervention contains of an online guideline and interactive coaching sessions, aiming to strengthen supervisor support to employees with CMHP. The online guideline presents five themes for supervisors: 1) signal CMHP affecting the employee's behaviour or work timely, 2) talk about impact of CMHP at work, 3) stimulate employee's autonomy and sense of responsibility, 4) explore, facilitate and evaluate job accommodations to match work with employee's needs and abilities, and 5) ask for occupational health support to select tailored interventions. Each theme is presented in more layers on the website: from short and simple messages on the home page to long and more in-depth information on the links, in order to tailor the amount and depth of information to the available time and needs of the supervisor. The coaching sessions, facilitated by OHPs, provide guidance for the supervisor on the dialogue with employees, before and while struggling at work due to CMHP. We conducted a realist evaluation (Chapter 6) with 19 participating organisations and 23 OHPs delivering the intervention, through one introduction session and on average three coaching sessions with supervisors, individually or in small groups. The SAW-SG intervention can be found on the following website [\[link\]](#).

#### ***3.2. Participation of workplace stakeholders throughout the research process***

The SAW-SG intervention responded to the need of supervisors to use a behaviour-oriented, preventive approach. This intervention led to positive changes on supportive behaviour, self-efficacy, and skills of the supervisor. Intervention mapping was considered a valuable tool as it provided a systematic process to identify, structure and prioritize factors and select practical strategies to induce the targeted behaviour. Using participatory approach throughout the research process with workplace stakeholders led to a well-received intervention with feasible implementation strategies, from initial needs assessment to evaluation and dissemination (39). As a result, the content and implementation were supported by the users of the intervention (supervisors) as well as by the implementers (OHPs). The strategies for implementation were drafted by the implementers themselves, leading to strong adherence. To actively involve stakeholders in all phases of the development and evaluation process requires researchers to let go of control and to strengthen ownership by workplace stakeholder in the field. Based on our positive experiences to actively involve stakeholders, we underscore the need for

a participatory approach and more interactive research methods (40). Realist research allows for this, as the research process is ultimately iterative, flexible and transparent.

### **3.3. COVID-19 pandemic**

An important contextual factor throughout the studies in this dissertation was the COVID-19 pandemic. This unforeseen circumstance had a great impact on the way the studies were carried out. To work from home had limitations, but also offered new opportunities. Technically, an opportunity was that most OHPs could now deliver the intervention online, reducing travelling time of supervisors. Also, in selection of participants, OHPs and participating organisations were not limited to region or locations to organise the coaching sessions. For the pre-test and evaluation of the intervention, data were collected using video- and audio calls. Although online means for interviews cannot completely replace face to face interviews, they work well as a viable data collection tool for qualitative research (41). A limitation may have been that OHPs missed out on non-verbal cues during coaching sessions. However, in the evaluation of the intervention, no difference was found in results between those coaching online versus face to face. It could be interesting in a next evaluation study, post COVID, to explore whether participants prefer online, face to face or hybrid coaching sessions and implement the intervention accordingly.

### **3.4. Profile of supervisors**

Regarding the question for Whom this intervention worked, we found two interesting features of supervisors (Chapter 6). The first feature was regarding supervisors' previous experience with mental health problems, especially when they faced mental health problems themselves or in their personal life, rather than their experience in their work as supervisor. The second feature was regarding previous training or courses. Both contributed to the increase in supportive behaviour in the SAW-SG intervention (Chapter 6). Based on those findings, we can say that if the supervisor better understands how it feels to deal with mental health problems (either by the lived experience or by training), then they are better able to support their employees with mental health problems. One explanation could be that supervisors who are more understanding also find the coaching sessions and guideline more useful, because they recognized the given actions from their own experience. This is in line with findings in Chapter 3 and 4, that a supportive supervisor shows trust, openness and a proactive, connected and involved attitude towards the employee. Transferring the learnings into behaviour in leadership training depends highly on whether the training is perceived as useful, relevant and valuable (42).

Another explanation could be that supervisors are more motivated to transfer skills learned during training if they perceive that their efforts are rewarded, such as the expectancy to relate better to their employees, based on the expectancy theory (43). This is in line with the Self-Determination theory, explaining basic needs on the experience of autonomy, competence and relatedness (44). Based on this theory, engaging leaders who inspire, strengthen, and relate to their employees would reduce employee's levels of burnout and increase their levels of work engagement. The style of engaging leadership leads to a better match between the individual and the job, when maximizing the

experience of autonomy, competence and relatedness of employees (45). Those basic needs are frequently used in leadership interventions or interventions targeting working conditions for employees (24, 46). Especially for employees facing mental health problems, it remains important to address those basic needs by stimulating autonomy, shared decision-making and offering constructive feedback, as addressed in the guideline. In conclusion, being empathic and engaged towards employees with mental health problems is crucial for supervisors.

### **3.5. Implementation by labour experts**

Matching the employee's capabilities with the work requirements and the work context during (return to) work processes is in its essence the expertise of labour experts in the Netherlands (Chapter 1). During the realist evaluation (Chapter 6) we observed that labour experts were feasible implementers of the intervention. Their expertise on matching the employee's capacities with their work requirements and work context before sick leave is very relevant. In line with the Capability approach, this led to more focus on abilities and opportunities to adjust work (often temporarily) and less focus on medical conditions and treatment.

Although coaching is one of the core competences in their professional profile, in practice labour experts often advise supervisors on single sick leave cases, rather than coaching supervisors on prevention. Therefore, in our intervention, labour experts adhered to a relatively new role. Having more experience with coaching and being more familiar with the organisational context based on previous collaborations were enhancing factors being when coaching supervisors, as reported by labour experts (Chapter 6) (47). A good work relationship helped labour experts to tailor the intervention to the needs of the participating supervisors, for example by organising a webinar, offer peer consultation and education to increase mental health literacy (48, 49).

As stated in the general introduction (Chapter 1), to implement this preventive intervention it required labour experts to have good insight in the multifactorial aetiology of mental health and into high risk groups, as well as expertise in communication between professional and the employer (47). Reflecting on the profile of those professionals, we found that 1) basic knowledge on the impact of mental health problems and psychosocial risk factors at work, 2) skills to independently and empathically advise and coach supervisors, based on a trustful working relationship, and 3) matching the employee's work capacities with their work and work context by assessing and weighing factors and work accommodations, were important requirements to successfully implement this intervention. Especially the first and second are general requirements that other OHPs also meet. Labour experts might need to invest into their skills on communication with employers on prevention, especially on coaching supervisors on their behaviour and leadership style. Otherwise, their expertise deemed essential since the third requirement on matching work was helping supervisors to think further than the usual solution. Matching is a creative and pragmatic weighing process on personal, interpersonal and contextual factors.

### **3.6. Use of integrated employer's model to induce behavioural change**

The Integrated Model of Behaviour prediction was used to frame employer's behaviour as the outcome of the SAW-SG intervention (50). This model is used as a theory of change describing the "How and why" this intervention works, explaining behavioural change of individuals (1). Because the employer is technically a group of individuals, in our study supervisors represent the employer's behaviour. Supervisors are perceived as individuals demonstrating certain behaviours and behaviour determinants. We believed that targeting the behaviour of supervisors demanded an integrative approach. The Integrated Model of Behaviour prediction *for employers* allowed for the integration of intrinsic factors and external factors towards behaviour change. Reflecting on our intervention, the chosen strategies (Chapter 5) enabled OHPs to address organisational and general motivational factors during coaching. Given the reflections in this discussion, the profile of the supervisors deemed an important motivational factor and organisational climate, the COVID-19 pandemic and a safe learning climate were important external organisational factors, of influence on supervisor's behaviour. Therefore, the model helped us to identify important factors other than the behavioural determinants on Attitude, social pressure and self-efficacy (ASE). We can broadly say that those ASE determinants seem to be about the willingness of supervisors, resulting into the intention to change. Skills and insights gained through the intervention represents the capacity of employers to be able to change. And the identified environmental factors, such as a safe learning climate, and working from home reflected the level of being 'enabled', referring to the Capability approach also.

### **3.7. Wider application of the SAW-SG intervention**

The SAW-SG intervention focused on supervisory support for employees who are still at work and face mental health problems, targeting employees "at risk" of negative work outcomes (secondary prevention). However, during the coaching sessions, supervisors felt more urgency to discuss employees with CMHP on sick leave (referring to tertiary prevention) and how to support the return to work process of those employees. This could be due to the Dutch Gatekeeper Improvement Act, where the employer is responsible for the return to work process of sick-listed workers during the first two years of sickness absence. Another explanation may be that teams were facing limited human capacity, due to shortages in the labour market. On the other side of prevention, on primary prevention, supervisors used the basic conditions in the guideline to discuss the sustainable employability of *all* employees. For example, the section on Know your employees and their regular working behaviour. This seemed in line with the Working Conditions Act, in which employers are required to ensure a safe and healthy work environment for their employees. Although this intervention targets supportive behaviour once employees with CMHP struggle at work, the given actions in the guideline could also be used to promote a healthy work environment for all employees, to promote work engagement (45), or to reduce psychosocial risk factors (51). In conclusion, the SAW-SG intervention has the potential to strengthen supervisor support before mental health problems influence work as well as during the return to work process. Further research is needed to explore the needed changes and impact of the intervention on outcomes of sustainable employability and return to work.

#### 4. Methodological considerations

We aimed to unravel less tangible factors that promote work participation. Using realist research was a methodological answer to this. Reflections on the realist approach are presented below.

Setting up a protocol study advanced our methodological understanding of realist research. We provided insight in applying a realist approach to the review process, which is relatively new in the field of occupational health. It helped us to familiarize ourselves with realist terminology and the heuristic of developing, testing and refining middle range program theories. This resulted into a rigor analysis presented in the realist review, providing insights into mechanisms and contextual factors promoting work participation. The yield of the realist approach in the review motivated us to evaluate our workplace intervention using a realist approach instead of a positivistic approach. During the period of this research project, we noted how realist research gained interest in the Netherlands within our field. It is nowadays considered a viable approach to novel research projects by grant providers and researchers. From our experience, a protocol study is one way to explore the additional value and feasibility of a realist approach towards new studies.

We used the following basic concepts to conduct the realist review and realist evaluation: generative causation (3), ontological depth (4) and retroductive theorizing (52). Derived from the concept of generative causation (3), we revealed underpinning mechanisms, such as trust, openness and proactivity, on the interpersonal dynamics between employee and employer within the organisational context. Uncovering mechanisms in those deeper layers advanced our theoretical understanding of work participation for employees with CMHP, beyond the known personal- and workplace factors to stay and perform well at work. The empirical reality (top of iceberg above water level) on staying at work and work performance is considered to be the result of those underpinning mechanisms (iceberg beneath water level), referring to ontological depth (4). As a result, beyond the individual- and organisational level, we added mechanisms on the interpersonal level between employee and supervisor. Those mechanisms were revealed due to retroductive theorizing (52), the activity of uncovering hidden mechanisms, that we found a great asset of realist approach versus a positivistic approach.

The Capability-for-Work model helped us to depict the various factors that need to be assessed and weighed to promote work participation, as presented in the realist review (Chapter 3). This model also helped us to shed more light on the context and how conversion factors in the workplace (e.g. interventions, reducing work load, work accommodations) lead to capabilities and work outcomes. The realist approach helped us to relate contextual factors to outcomes such as the choice to stay at work (Chapter 3) or supportive supervisor behaviour (Chapter 6). Also, it allowed for an iterative process to detect underlying mechanisms, and to relate those mechanisms to capabilities, work outcomes and contextual factors (CMO configurations) (53). In this way, the Capability approach and realist approach complemented one and another.

It is remarkable how little empirical evidence was available in the field of occupational health regarding the specific working mechanisms of workplace interventions (Chapter 3). By using a realist approach, we found that cross-disciplinary mechanisms may occur while working with people in

various settings. Although the context can differ highly among disciplines, we could learn from similar mechanisms revealed in other fields. For example, a trustful relationship between employee and supervisor was found as an important mechanism to enable the employee to stay at work. A recent realist evaluation deepened the understanding of how this trustful relationship works, between community health workers and vulnerable citizens (54). The trustful relationship was rooted in three mental models: recognition, equality, and reciprocity. The found contextual factors in that study seem also relevant to consider our topic on a trustful relationship between employee and supervisor. Namely, supervisors adopt a client-centred attitude, frequent moments of contact and linking well with the experience of the work. This depicts how, by using a realist approach, researchers can learn from other disciplines in the process of searching for CMO configurations and middle range (program) theories (55).

In conclusion, using a realist approach led to a deeper understanding of work participation by building, testing and refining theory, making it a valuable approach to better understand complex phenomena in occupational health (3, 56).

## **5. Recommendations for future research**

Research based knowledge on mental health and the promotion of at-work participation is essential, and effects on work outcomes thus far are still small (57, 58). This dissertation contributes to the literature by gaining knowledge on how to promote work participation for employees with CMHP. Here we present some recommendations for future research, derived from our studies.

The employee's mental health starts early in life, way before work or employment begins (58). The complexity of promoting work participation and mental health can be found in the different support programs that need to be in place at different time periods in the employee's life. Gaining insights into what interventions are effective in what phase in life requires research to use a life course lens and more intense, longitudinal real-time designs. Therefore, we stress to conduct longitudinal studies, exploring needs that follow the employee's life journey (58). Furthermore, it will be interesting to investigate the effects of the SAW-SG intervention beyond the effects on supervisor's behaviour as we did in our study. Although the guideline themes and actions were designed by employees with CMHP also, we do not know whether employees find these actions helpful. We therefore recommend exploring the potential effectiveness of changes in the experiences of supervisory support by employees, as well as on work outcomes such as absenteeism and work productivity (38, 59).

We developed a novel set of capabilities on work participation for employees with CMHP, using the Capability-for-Work model. A next step could be to qualitatively explore those capabilities. This will further develop the Capability-for-Work model on work participation for employees with CMHP. Also, the set of capabilities for working with CMHP can be tested in relation to work outcomes. Furthermore, we recommend to qualitatively explore the process of choice on reporting sick or staying at work, that showed to have no empirical evidence in the realist review but seemed an essential process on realizing capabilities (Chapter 3).



In this dissertation, we responded to previous recommendations to understand the complex mechanisms and contextual factors using an initial program theory and process evaluation, in order to work with (rather than against) different services, individuals, and settings (60). Insights from our realist evaluation could potentially support the implementation phase that is flexible and adaptable to a particular context. In a next round, we recommend to further explore the SAW-SG intervention when being delivered in more diverse settings and by other OHPs than labour experts. Implementation parameters could be on how supervisors are facilitated in time (e.g. training in or out of working hours, repeated periodically or a separate training) and on senior management commitment (38). On the working mechanisms, self-efficacy of supervisors seemed an important mechanism. Self-efficacy has been found to be a modifiable predictor of work participation, also in return to work trajectories (13, 61). We recommend to further explore the experience of self-efficacy in their provided support through workplace interventions. In addition, we recommend investing in research on the effects of guidelines on transfer to daily practices of supervisors and on mental health literacy and stigma in organisations (38).

From experience during our studies, we have a few recommendations for future realist research. Following the basic concepts of realist research, the activity of uncovering mechanisms and configuring context-mechanism-outcome is time-consuming. Extra time is needed to this activity, especially when researchers are new to the realist approach. Besides, due to the often-complex jargon that is used to define CMO configurations, it is recommendable that researchers are familiar to the topic under study. Also, we recommend regular sparring with experts from the field during the analyses process. This will help to translate research findings to policies and practice (62). From our experience, consulting co-researchers who are also experienced with realist research is helpful, to deepen the application of the realist concepts. For this, we recommend to build upon local or national peer groups among researchers from various disciplines, as we did in the nationwide peer group: "Dutch realist consultation group".

## **6. Implications for practice**

Workplace interventions that promote work participation for employees with CMHP should be implemented at all levels of the organisation (48). Therefore, we present practical implications on various levels.

### **6.1. Implications for the organisation**

In line with the Dutch Working Conditions Act and Gatekeeper Improvement Act, employers must pursue a more proactive approach towards prevention by creating mentally healthy workplaces. Therefore, organisations need to become aware and enact on their societal responsibility, besides financial and operational targets. Investing in the human part of leadership is clearly one implication derived from our studies. It starts from hiring supervisors who are empathic, engaged and experienced with regard to mental health at work. Also, organisations should offer training for supervisors, either obligatory or voluntarily. A short introduction on prevention and mental health could be an obligatory informative session for all supervisors in the organisation, to increase their

mental health literacy. Since we found that willingness to learn was a key mechanism leading to increased supportive behaviour, an obligatory coaching trajectory is probably not effective. Each organisation should explore and tailor interventions on prevention and invest in the competence of employers.

Supervisors addressed the importance of trial and error in supporting employees struggling at work due to mental health problems. Senior management of organisations should allocate sufficient professional autonomy to supervisors to enable them to offer tailored support and work accommodations for employees (12). Supervisors should be rewarded by the organisation in their actions and successes to support employees with CMHP. Ways to acknowledge and reward supervisors for their work, beyond assessment on sick leave numbers, should be explored. And employers should appoint sufficient time and attention to support supervisors, investing in their competence by low-key access to occupational health experts. Like the employees, supervisors wished to be recognized and supported in the way they deal with complex cases regarding mental health in the workplace (36). Similarly, like the employees, supervisors need a safe environment to increase supportive behaviours for employees with CMHP. It is the organisational responsibility to create a safe work environment, leading to a “mentally healthy workplace”.

### ***6.2. Implications for the labour expert***

Labour experts are feasible implementers of a preventive workplace intervention. Their expertise on matching the employee's work capacities with work requirements and work context is very relevant. However, we found that while selecting and training professionals to deliver such interventions, more emphasize is needed on their competencies and experience, than the registration to a certain professional group. Then, we could think of new profiles of professionals based on their expertise in the work participation and reintegration process: Stay at Work Experts, as well as Return to Work experts, instead of the current professionals grouped into disciplines such as HR professional, labour expert, case manager, occupational health physician etcetera. Our intervention led to a train-the-trainer program of two days, with a mixed group of HR professionals and OHPs who meet the given requirements. They seemed well-equipped after the training to tailor and deliver the SAW-SG intervention in their organisation.

Labour experts should profile a more prominent role in prevention, broader than the individual sick leave cases. Collaboration with HR and senior management is important in this to clarify roles and responsibilities of various workplace actors. Labour experts can do this through sensation activities on the urgency of prevention in their organisations, possibly through explanations on what employers could save by investing in supervisory support versus the costs of long term sickness absence. The can also be used as coaches on improving supervisory support.

### ***6.3. Implications for the supervisor***

This dissertation has shared numerous insights on practical implications for supervisors. The actions in each theme of the guideline and the basic conditions (Chapter 5) give supervisors detailed

guidance on how to support employees with CMHP. In general, it is deemed beneficial for supervisors to invest in a trustful relationship with their employees. Supervisors need to be aware of their role and responsibility and gain insight into the role of other workplace stakeholders regarding prevention and mental health at work. They could exchange ideas with occupational health experts and peer supervisors about their own role and behaviour in the preventive phase and be challenged in this. Supervisors should exert trust, openness and a proactive, connected and involved attitude towards their employees with CMHP. They can improve their skills and self-efficacy in addressing mental health, when they are willing to learn and change. The use of action plans, derived from the practical actions in the online guideline, can support them in this change process. A last word can be said on the sandwiched position that supervisors experience in the wider management literature (63). Having a large span of control (many employees in their team) and financial and operational targets may limit supervisors to pay attention to all employees, in the way they might want to. We found that learning from occupational health experts and peer support among supervisors, e.g. through success stories, are ways to overcome barriers to address mental health at the workplace, even with large teams or high targets.

## **7. Conclusion**

Promoting work participation for employees with common mental health problems is a complex and dynamic process. Using a realist approach led to a deeper understanding of work participation by building, testing and refining theory, making it a valuable approach to better understand complex phenomena in occupational health. In addition to personal- and organisational factors, we suggest to add the interpersonal dynamics between employee and employer as a third major component to evaluate and promote work participation. On this interpersonal level, having a trustful, engaged and proactive supervisor forms a fundamental base to stay at work, within a safe organisational climate. Supervisors should signal and address problems in the workplace on time, and find solutions by stimulating the employee's autonomy, explore work accommodations and ask for occupational health support. Our studies showed that a behaviour-oriented preventive intervention can improve supervisors' awareness, skills and behaviour in supporting those employees. Occupational health experts should be involved in preventive workplace interventions and training supervisors, increasing the capacity of employers, which in turn can support employees to stay and perform well in their jobs. Lastly, we stress the need for a focus shift from managing sickness absence towards addressing prevention by early identification of work capabilities, to promote work participation.

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## Chapter 8

Summary

## **Summary**

One out of five individuals experiences mental health problems during working life. Employees with common mental health problems (CMHP), such as stress, anxiety or depression, are more likely to struggle while being at work. This leads to negative work outcomes, such as diminished productivity, absenteeism or presenteeism, working while being ill. Over the past decades, mental health problems at work, absenteeism and disability benefits have strongly increased in most Western countries, causing a burden for individuals who suffer, as well as for the society and economy. While work can make ill, there is strong evidence that working for employees with CMHP actually contributes to health, recovery and overall well-being. This is in line with the call of the Organisation for Economic Co-operation and Development (OECD) for preventing instead of reacting to negative work outcomes resulting from poor mental health. To promote work participation, effective preventive workplace interventions and employers' guidelines targeting employees with CMHP at work are needed. The aim of this dissertation is to gain insights on how to effectually promote work participation for employees with CMHP and how supervisors can support those employees to stay at work, translating those insights into a novel workplace intervention.

So far, the focus of research on mental health problems in occupational health has generally been on the sick-listed employee, intervening in reaction to negative work outcomes and return to work processes. The present dissertation focuses on promotion of at-work participation of employees with CMHP, before they call in sick. This change of focus asks for an exploration of factors while being at work, both from research as well as from workplace stakeholders who dealt with CMHP at work. Also, this more preventive approach may disclose other causes of limited work participation problems than causes on the employee's side, for example in organisations or the given support by supervisors and occupational health professionals.

The first study in this dissertation (chapter 2) presents the protocol of a systematic realist review on work participation for employees with CMHP. Realist research is a theory-driven evaluation method that is designed for complex social interventions or phenomena, aiming to answer the question 'What works, for whom, under what circumstances and how?'. This review protocol provides insights on how to apply a realist approach in theory building on complex phenomena such as work participation. By using a realist synthesis, we developed an explanatory framework resulting in a contextual understanding of mechanisms of work participation. We applied a heuristic model based on the Capability approach to further understand work participation. The Capability-for-Work model defines capabilities as functioning that the person is able to achieve, depending on his or her particular circumstances. This model incorporates various personal- and environmental (work) conditions, which enable employees to convert personal- and work inputs into work capabilities. Also, it reflects the complex interaction of multiple factors and its emphasis on the work context. This study adds to the academic literature on the use of a realist approach in the examination of evidence-based organizational interventions. This facilitates researchers to gain insights into the application of realist research in the field of occupational health and enhance the interpretation of our review findings.

The second study (chapter 3) provides the results of the systematic realist review, investigating work participation among employees with CMHP. This review reveals mechanisms and

contextual factors on outcomes of work participation, that are work performance and stay at work for employees with CMHP. We derived various program theories using a realist synthesis of recent scientific literature on how the organisational climate, social support in the work context, and perceived job characteristics enable employees to participate at work. The work environment can support employees to participate at work. Adequate and timely social support and supportive relationships, from colleagues but particularly supervisors who are willing to listen and assist in work related problems, increase the chance to stay at work for employees with CMHP. Furthermore, coping styles, severity of mental health symptoms, the personal context and features of interventions enable employees to participate at work. Two novel explanatory frameworks, based on the Capability-for-Work model, present causal relations between personal- and work factors and underlying mechanisms leading to work performance and stay at work. The study reveals that it is not the medical condition itself, but its interactive effect with work and the work context that influence the employee's functioning at work and ability to stay at work. Therefore, it will be more interesting to investigate whether employees are "being able" and "being enabled" to participate in work, and thus to unravel which capabilities are needed to do so, rather than solely to assess their medical condition. Furthermore, the study presents specific capabilities for employees with CMHP, contributing to the development of the Capability set for work. We suppose that employees with CMHP can realize to stay at work through the following set of capabilities: a) by having meaningful relations and social support at work, b) exerting control, c) by evaluating and adjusting the workload, d) by experiencing freedom to create opportunities for active coping, e) by experiencing better health, increased cognitive functioning and work performance. Those insights are translated into practical implications for employers, occupational health professionals and researchers in the development and evaluation of evidence-based interventions.

The third study (chapter 4) shows a conceptualization on how to promote Stay at work (SAW) for employees with CMHP from a multiple stakeholder perspective. Perspectives of employees with CMHP (n=18), supervisors (n=17) and occupational health professionals (n=14) were explored and resulted into three concept maps. Thematic analysis of the concept maps led to the following meta-clusters: A) Employee's experience of autonomy in work (employee's responsibility, freedom to exert control, meaningful work), B) Supervisor support (being proactive, connected and involved), C) Ways to match employee's capacities to work (job accommodations), D) Safe social climate in workplace (transparent organizational culture, collective responsibility in teams, collegial support), and E) professional and organizational support, including collaboration with occupational health professionals. Above all, a safe and trustful work environment, in which employee's autonomy, capacities and needs are addressed by the supervisor, forms a fundamental base to stay at work. Despite the different roles that stakeholders have in the workplace, perspectives on promoting factors to SAW overlapped strongly between them. However, differences were found between stakeholder-groups on the rated importance to these shared ideas. Promoting SAW is a dynamic process that requires joined efforts by workplace stakeholders, in which more attention is needed to the interpersonal dynamics between employer and employee. This study fills an important gap between

theory and practice by presenting strategies for employees, employers and occupational health professionals to effectively promote SAW, that are useful for developing workplace interventions.

The fourth study (chapter 5) presents the development of a workplace intervention to strengthen supervisor's support for employees with CMHP. We applied the Intervention mapping approach, by actively involving workplace stakeholders (employees with CMHP, supervisors and occupational health professionals) throughout the development process and using the Integrated model of behaviour prediction for employers. Thematic analysis was used to analyse interviews and focus groups. Based on a comprehensive needs assessment, the Stay at work-Supervisor Guideline (SAW-SG) intervention resulted in an online guideline, containing five themes to signal and address problems in the workplace and find solutions by stimulating the employee's autonomy, explore job accommodations and ask for occupational health support. In addition, the online guideline presents basic conditions on how to create mentally healthy workplaces. Labour experts delivered the intervention by coaching the supervisors in applying the guideline, as labour experts are independent and experts in matching employee's capabilities with work and work environment. The intervention was pre-tested by labour experts (n=8) and supervisors (n=7) on its usefulness, user-friendliness, and attractiveness. They found the intervention promising as it responds to the needs of supervisors in their role, responsibility and ways to support employees with mental health issues. Supervisors reported to learn how to signal and address mental health issues and match work and the work environment with capabilities of employees. The active involvement of workplace stakeholders throughout the process resulted into a well-received intervention. Also, Intervention mapping provided practical strategies to induce supportive behaviour of supervisors, bridging theory with practice. This study adds to the literature on workplace interventions in mental health, through an innovative, evidence-based intervention with a preventive approach by strengthening the supervisor's supportive behaviour regarding mental health at work.

The last study of this dissertation (chapter 6) aims to evaluate whether, how and under which circumstances the SAW-SG intervention works. This intervention aims to strengthen supportive behaviour of Dutch supervisors in promoting work participation of employees with CMHP. In a mixed-methods realist design, we tested for changes over time on supportive behaviour and behavioural determinants (i.e. self-efficacy, social influence, attitude, intention and skills) of supervisors. In addition, the influence of personal, environmental and intervention factors on the changes in those outcomes were assessed. Quantitative data were collected using self-report questionnaires by supervisors, at baseline, post intervention and post follow-up. Qualitative data through interviews were collected to validate the initial program theory and provided insights on mechanisms triggering the outcomes. Compared to baseline (n=92), supportive behaviour, self-efficacy and skills of supervisors increased significantly post intervention (n=65, 3 months) and post follow up (n=56, 6 months). A statistically significant regression model ( $R^2 = 0.29$ ) indicated that factors such as being assessed on sick leave numbers, previous collaboration between the labour expert and supervisor, and having dealt with CMHP before in personal life were related to the changes. According to supervisors, important working mechanisms on the interpersonal level were occupational health expertise, trust, easy access to the labour expert and social support among co-supervisors. On the

individual level, mechanisms were self-efficacy, willingness to learn and use of action planning by supervisors. Conditional organizational circumstances were being given time and structural access to occupational health expertise, and experiencing professional autonomy to supervisors in offering job accommodations, in a safe learning climate. This preventive, multifaceted, action-oriented workplace intervention had a positive impact on supervisor support in promoting work participation among employees with CMHP. These findings may encourage employers to invest in the capacity of supervisors, thereby enabling employees with CMHP to keep working and perform well in their jobs.

Overall, there can be concluded that promoting work participation for employees with common mental health problems is a complex and dynamic process. In line with the Dutch Working Conditions Act and Gatekeeper Improvement Act, employers must pursue a more proactive approach towards prevention by creating mentally healthy workplaces. Therefore, organisations need to become aware and enact on their societal responsibility, besides financial and operational targets. Investing in the human part of leadership is clearly one implication derived from our studies. Like the employees, supervisors wished to be recognized and supported in the way they deal with complex cases regarding mental health in the workplace. Our studies showed that a behaviour-oriented preventive intervention can improve supervisors' awareness, skills and behaviour in supporting those employees. Occupational health experts should be involved in preventive workplace interventions and training supervisors, increasing the capacity of employers, which in turn can support employees to stay and perform well in their jobs. We recommend exploring the potential effectiveness of such interventions on the experienced supervisory support by employees, as well as on work outcomes such as absenteeism and work productivity. To evaluate and promote at-work participation of employees with CMHP, we suggest to add the interpersonal dynamics between employee and employer as a third major component besides personal- and work factors. Where supervisors are not allowed to ask for the employee's medical condition due to privacy, they may ask the employee about capabilities to work and match this with the work and work environment through (temporary) job accommodations. In this way, we contribute to the ongoing paradigm shift of focusing more on abilities and functioning instead of conditions and limitations.



## Appendices

### **Samenvatting (Dutch summary)**

Eén op de vijf personen krijgt in diens werkzame leven te maken met psychische problemen. Werknemers met veel voorkomende psychische problemen (VVPP), zoals stress, angst, depressie of mentale vermoeidheid, hebben meer kans op problemen tijdens hun werk. Dit leidt tot negatieve werkuitkomsten, zoals verminderde productiviteit, ziekteverzuim of presentieisme, werken terwijl men ziek is. In de afgelopen decennia zijn psychische problemen op het werk, het ziekteverzuim en de arbeidsongeschiktheidsuitkeringen in de meeste westerse landen sterk toegenomen, wat een last is voor de personen die eraan lijden, maar ook voor de samenleving en de economie. Hoewel werk kan leiden tot ziekte, zijn er sterke aanwijzingen dat werken voor werknemers met VVPP juist bijdraagt aan gezondheid, herstel en algemeen welzijn. Dit sluit aan bij de oproep van de Organisation for Economic Co-operation and Development (OECD) om negatieve werkuitkomsten als gevolg van een slechte mentale gezondheid te voorkomen in plaats van te 'genezen'. Om arbeidsparticipatie van werknemers met VVPP te bevorderen zijn effectieve, preventieve, organisatie-gerichte interventies en werkgeversrichtlijnen nodig. Het doel van dit proefschrift is om inzicht te verkrijgen over hoe de arbeidsparticipatie van werknemers met VVPP effectief kan worden bevorderd. De inzichten over hoe leidinggevenden deze werknemers kunnen ondersteunen om aan het werk te blijven worden vertaald naar een nieuwe organisatie-gerichte interventie.

De primaire focus van onderzoek naar psychische problemen in de arbeidsgeneeskundige zorg lag tot nu toe meestal op de ziekgemelde werknemer, met interventies als reactie op negatieve werkuitkomsten en re-integratieprocessen. Het huidige proefschrift richt zich op bevordering van de arbeidsparticipatie van werknemers met VVPP voordat zij zich ziek melden. Deze verandering van focus vraagt om een verkenning van factoren in het werk, zowel vanuit de literatuur als vanuit diverse actoren op de werkplek die te maken hebben met psychische problemen op het werk. Ook kan deze verkenning in de preventieve fase andere oorzaken van beperkte arbeidsparticipatie aan het licht brengen dan oorzaken aan de kant van de werknemer, bijvoorbeeld in organisaties of de gegeven ondersteuning door leidinggevenden en professionals op het werk.

De eerste studie in dit proefschrift (hoofdstuk 2) presenteert het protocol van een systematische realistische literatuurreview naar arbeidsparticipatie voor werknemers met VVPP. Realistische onderzoekers willen antwoord verkrijgen op de vraag "Wat werkt, voor wie, onder welke omstandigheden en hoe?". Dit reviewprotocol biedt inzichten over hoe een realistische benadering kan worden toegepast bij theorievorming over complexe fenomenen zoals arbeidsparticipatie. Door gebruik te maken van een realistische synthese ontwikkelden we een kader dat inzicht geeft in mechanismen en contextuele factoren van invloed op arbeidsparticipatie. We hebben een heuristisch model toegepast dat gebaseerd is op de Capability-benadering om arbeidsparticipatie beter te begrijpen. Het Capability-for-Work model definieert capaciteiten als het functioneren dat de persoon kan bereiken, afhankelijk van diens specifieke omstandigheden. Dit model omvat verschillende factoren, die de werknemer in staat stelt persoonlijke- en werkbronnen om te zetten in werkcapaciteiten. Ook weerspiegelt het de complexe interactie van diverse werk- en privéfactoren en de nadruk op de werkcontext. Deze studie draagt bij aan de academische literatuur over het gebruik



van een realistische benadering. Dit faciliteert onderzoekers om inzicht te krijgen in de toepassing van realistisch onderzoek op het gebied van arbeidsparticipatie en verbetert de interpretatie van de bevindingen van de review in hoofdstuk 3.

De tweede studie (hoofdstuk 3) presenteert de resultaten van de systematische realist review, waarbij de arbeidsparticipatie van werknemers met VVPP wordt onderzocht. Deze review onthult mechanismen en contextuele factoren op uitkomsten van arbeidsparticipatie, te weten functioneren op het werk en aan het werk blijven van werknemers met VVPP. Aan de hand van een realistische synthese van recente wetenschappelijke literatuur hebben we verschillende programmatheorieën ontwikkeld over hoe het organisatieklimaat, sociale steun in de werkcontext en baankenmerken werknemers in staat stellen om te participeren op het werk. De werkomgeving kan werknemers ondersteunen om te blijven werken. Voldoende en tijdige sociale steun, van collega's maar vooral van leidinggevendenden die bereid zijn te luisteren en te helpen bij werk gerelateerde problemen, vergroten de kans om aan het werk te blijven voor werknemers met VVPP. Verder stelt het hebben van een actieve copingstijl, de afname van psychische klachten en de persoonlijke context werknemers in staat om te participeren op het werk. Twee nieuwe verklarende kaders, gebaseerd op het Capability-for-Work model, presenteren de samenhang tussen persoonlijke- en werkfactoren en onderliggende mechanismen die leiden tot blijven werken en behoud van werkprestaties. Uit de studie blijkt dat niet de medische aandoening zelf, maar het interactieve effect daarvan met het werk en de werkcontext van invloed zijn op het functioneren van de werknemer en het vermogen om aan het werk te blijven. Daarom is het interessanter te onderzoeken of werknemers "in staat zijn" en "in staat worden gesteld" om aan het werk deel te nemen, en dus te ontrafelen welke capaciteiten daarvoor nodig zijn, in plaats van alleen hun medische toestand te beoordelen. In doorontwikkeling van de eerder gerapporteerde zeven werkwaarden, veronderstellen wij dat werknemers met VVPP kunnen blijven werken via de volgende capaciteiten: a) zinvolle relaties en sociale steun op het werk te hebben, b) controle op het werk uit blijven oefenen, c) de werklast te evalueren en aan te passen, d) vrijheid ervaren om mogelijkheden voor actieve coping te creëren, e) een betere gezondheid, toegenomen cognitief functioneren en betere werkprestaties te ervaren. Deze inzichten worden vertaald naar praktische implicaties voor werkgevers, professionals en onderzoekers voor de ontwikkeling en evaluatie van evidence-based interventies.

De derde studie (hoofdstuk 4) toont een conceptualisering over hoe Blijven werken voor werknemers met VVPP kan worden bevorderd vanuit het perspectief van meerdere betrokkenen. Perspectieven van werknemers met veel voorkomende psychische problemen (n=18), leidinggevendenden (n=17) en Arbo professionals (n=14) werden verkend en resulteerden in een concept map van elke betrokken groep. Thematische analyse van de concept maps leidde tot de volgende meta-clusters: A) Ervaren autonomie in het werk (gevoel van verantwoordelijkheid van de werknemer, vrijheid om controle uit te oefenen, werk ervaren als zinvol), B) Ondersteuning door de leidinggevende (proactief, in verbinding met werknemer en betrokkenheid tonen), C) Manieren om de capaciteiten van de werknemer af te stemmen op het werk (werk aanpassingen), D) Veilig sociaal klimaat op de werkplek (transparante organisatiecultuur, collectieve verantwoordelijkheid in teams,

collegiale ondersteuning), en E) professionele en organisatorische ondersteuning, waaronder samenwerking met Arbo professionals. Bovenal vormt een veilige en vertrouwenwekkende werkomgeving, waarin de autonomie, capaciteiten en behoeften van de werknemer door de leidinggevende worden aangepakt een fundamentele basis om aan het werk te blijven. Ondanks de verschillende rollen die de betrokkenen op de werkplek hebben, overlapt hun perspectieven op bevorderende factoren sterk. Het bevorderen om aan het werk te blijven is een dynamisch proces dat gezamenlijke inspanningen vereist van alle betrokkenen op de werkplek, waarbij meer aandacht nodig is voor de interpersoonlijke dynamiek tussen werkgever en werknemer. Deze studie slaat een belangrijke brug tussen theorie en praktijk door strategieën te presenteren voor werknemers, werkgevers en Arbo professionals om blijven werken effectief te bevorderen, die nuttig zijn voor het ontwikkelen van organisatie-gerichte interventies.

De vierde studie (hoofdstuk 5) presenteert de ontwikkeling van een organisatie-gerichte interventie om de ondersteuning van leidinggevenden aan werknemers met VVPP te versterken. We hebben de benadering van Intervention mapping toegepast, door diverse actoren op de werkplek (werknemers met VVPP, leidinggevenden en Arbo professionals) actief bij het ontwikkelproces te betrekken en door gebruik te maken van het Integratief gedragsmodel voor werkgevers. Thematische analyse werd gebruikt om interviews en focusgroepen te analyseren. De interventie Blijven werken met psychische klachten, gebaseerd op een uitgebreide behoeften-analyse, resulteerde in een online handreiking met vijf thema's. Deze bieden handvatten om problemen op de werkplek te signaleren en aan te pakken en oplossingen te vinden door de autonomie van de werknemer te stimuleren, werkaanpassingen te verkennen en ondersteuning van de Arbo professional te vragen. Daarnaast werden in de handreiking basis-ingrediënten gepresenteerd voor het creëren van mentaal gezonde werkplekken. In deze interventie voeren arbeidsdeskundigen coachende gesprekken met leidinggevenden over de thematiek in de handreiking. Dit werd door arbeidsdeskundigen gedaan vanwege hun onafhankelijke positie en expertise in passend werk, vanuit de capaciteiten van de werknemer, het werk en de werkomgeving. De interventie werd vooraf getest door arbeidsdeskundigen (n=8) en leidinggevenden (n=7) op bruikbaarheid, gebruiksvriendelijkheid en aantrekkelijkheid. Zij vonden de interventie veelbelovend omdat deze inspeelt op de behoeften van leidinggevenden in hun rol, verantwoordelijkheid en manieren om werknemers met psychische problemen te ondersteunen. Leidinggevenden gaven aan te leren hoe zij psychische problemen kunnen signaleren, hierover in gesprek gaan met werknemers, en hoe zij samen het werk en de werkomgeving kunnen afstemmen op de capaciteiten van de werknemers. De actieve betrokkenheid van werkgevers en arbeidsdeskundigen gedurende het hele ontwikkelproces resulteerde in een goed ontvangen interventie. De intervention mapping aanpak leverde praktische strategieën op om ondersteunend gedrag van leidinggevenden teweeg te brengen. Deze studie draagt bij aan de literatuur over organisatie-gerichte interventies op het gebied van preventie en mentale gezondheid, door middel van een innovatieve, evidence-based interventie.

De laatste studie van dit proefschrift (hoofdstuk 6) heeft het doel om te evalueren Of, hoe en onder welke omstandigheden de interventie Blijven werken met psychische klachten werkt. Deze

interventie is gericht op het versterken van ondersteunend gedrag van Nederlandse leidinggevenden aan werknemers met VVPP. In een mixed-methods realistisch design, testten we voor veranderingen in de tijd op ondersteunend gedrag en een aantal gedragsdeterminanten (o.a. eigen vertrouwen, sociale invloed, attitude, intentie en vaardigheden) van leidinggevenden. Daarnaast werd de invloed van persoonlijke-, omgevings- en interventiefactoren op de veranderingen in deze uitkomsten geanalyseerd. Kwantitatieve gegevens werden verzameld met behulp van vragenlijsten ingevuld door leidinggevenden, voor aanvang, na de interventie (3 maanden) en na de follow-up periode (6 maanden). Kwalitatieve gegevens via interviews werden verzameld om de initiële programmatheorie te valideren en gaven inzicht in mechanismen die de gemeten veranderingen 'in gang zetten'. Vergeleken met de voormeting (n=92) zijn het ondersteunend gedrag, het eigen vertrouwen en de vaardigheden van de leidinggevenden na de interventie (n=65) en na de follow-up periode (n=56) significant toegenomen. Een statistisch significant regressiemodel ( $R^2 = 0,29$ ) gaf aan dat factoren zoals beoordeeld worden op ziekteverzuimcijfers, eerdere samenwerking tussen arbeidsdeskundige en leidinggevende, en of leidinggevenden eerder in hun persoonlijke situatie met psychische problemen te maken hebben gehad, samenhangen met de veranderingen. Belangrijke werkende mechanismen op interpersoonlijk niveau waren volgens de leidinggevenden de bereikbaarheid en expertise van en vertrouwen in de Arbo professional, en sociale steun van leidinggevenden onderling. Op individueel niveau waren werkende mechanismen het reeds hebben van eigen vertrouwen, de bereidheid om te leren en het gebruik van actieplannen door leidinggevenden. Randvoorwaarden waren het krijgen van tijd en structurele toegang tot arbeidsdeskundige expertise, en de gegeven professionele autonomie aan leidinggevenden bij het aanbieden van werkaanpassingen, in een veilig leerklimaat. Deze preventieve, actiegerichte organisatie-interventie had een positief effect op de steun van de leidinggevenden bij het bevorderen van de arbeidsparticipatie van werknemers met VVPP. Deze bevindingen kunnen werkgevers aanmoedigen om te investeren in de capaciteit van leidinggevenden, waardoor werknemers met VVPP kunnen blijven werken en goed kunnen functioneren in hun werk.

Al met al kan geconcludeerd worden dat het bevorderen van arbeidsparticipatie voor werknemers met veel voorkomende psychische problemen een complex en dynamisch proces is. In lijn met de Arboret en Wet Verbetering Poortwachter moeten werkgevers een meer proactieve aanpak in preventie hanteren om mentaal gezonde werkplekken te creëren. Daarom moeten organisaties zich, naast financiële en operationele doelstellingen, bewust worden van hun maatschappelijke verantwoordelijkheid en daarnaar handelen. Investeren in het menselijke deel van leiderschap is duidelijk een implicatie die uit onze studies voortvloeit. Net als de werknemers zelf, willen leidinggevenden erkenning en ondersteuning in de manier waarop zij omgaan met complexe casussen van werknemers die last hebben van psychische problemen. Onze studies toonden aan dat een gedragsgerichte preventieve interventie het bewustzijn, eigen vertrouwen, vaardigheden en gedrag van leidinggevenden versterkte om deze werknemers te ondersteunen. Arbeidsdeskundigen en andere Arbo professionals moeten worden betrokken bij preventieve organisatie-gerichte interventies, bijvoorbeeld door het bijscholen, coachen, en adviseren van leidinggevenden. Hierdoor wordt de capaciteit van werkgevers vergroot, die op hun beurt werknemers kunnen ondersteunen om

te blijven werken, zodra zij het lastig hebben in werk en/of privé. In toekomstig onderzoek bevelen we aan om de potentiële effectiviteit van deze interventie te onderzoeken onder werknemers van leidinggevenden die deze nieuwe aanpak gebruiken, namelijk op hun ervaren steun, en ook op werkuitkomsten zoals ziekteverzuim en arbeidsproductiviteit. Verder blijkt uit die proefschrift dat de interpersoonlijke dynamiek tussen werknemer en werkgever toegevoegd kan worden als cruciaal element, naast persoonlijke- en werk gerelateerde factoren, om de arbeidsparticipatie van werknemers met VVPP te evalueren en te bevorderen. Waar leidinggevenden vanwege de privacy niet naar de medische toestand van de werknemer mogen vragen, kunnen zij de werknemer vragen naar de mogelijkheden om te werken en deze afstemmen op het werk en de werkomgeving door middel van (tijdelijke) werkaanpassingen. Op deze manier dragen wij bij aan de voortdurende paradigmaverschuiving waarbij meer aandacht wordt besteed aan capaciteiten en functioneren in werk, in plaats van te focussen op aandoeningen en beperkingen.

## Curriculum vitae

Suzanne van Hees (Tilburg, 04-06-1985) begon in 2002 haar studie Ergotherapie aan de Hogeschool van Arnhem en Nijmegen (HAN). Na afronding van haar bachelor (2007) is zij in de praktijk gaan werken als ergotherapeut, in Nijmegen bij het Radboud Universitair Medisch Centrum en in Zuidelijk- en Oost-Afrika. Gedurende 10 jaar werkte zij binnen verschillende klinische settings in de revalidatie, met cliënten die als gevolg van diverse chronische aandoeningen te maken hadden met participatiebeperkingen in alledaagse activiteiten, inclusief werk. In 2013 behaalde zij haar Master in Public Health, Health promotion and education, aan de Universiteit van Maastricht. Vanaf 2013 was zij naast ergotherapeut ook werkzaam als docent ergotherapie, beleidsadviseur sociale inclusie en onderzoeker in verschillende onderzoeks- en academische instellingen. In 2018 startte ze haar PhD programma aan de Universiteit van Tilburg als science practioner bij de Academische Werkplaats Arbeid en Gezondheid, naast haar functie als onderzoeker bij de HAN, in het lectoraat Arbeid en Gezondheid en Arbeidsdeskundigheid.

*Suzanne van Hees (Tilburg, 04-06-1985) started her studies in Occupational therapy at the HAN University of Applied Sciences in 2002. After completion of her Bachelor degree (2007), she started working in clinical practice as an occupational therapist, at the Radboud University Medical Centre and in Southern and Eastern Africa. For 10 years she worked within several clinical settings in rehabilitation, with clients facing participation restrictions in everyday activities including work, due to various chronic conditions. In 2013, she obtained her Master's degree in Public Health, Health promotion and education, at Maastricht University. From 2013, she has been working as a teacher/lecturer in occupational therapy, as a social inclusion advisor, and as a researcher in various research institutes. In 2018, she started her PhD program at the Tilburg University, besides her position as a researcher at the HAN University of Applied Sciences, in the research group of Work and Health and Labour expertise.*



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"It's not the Destination, it's the journey." — Ralph Waldo Emerson

Na een leuke schooltijd in Uden ging ik studeren in Nijmegen. Daar volgde ik met veel plezier de HBO-opleiding ergotherapie en woonde ik in het altijd even gezellige studentenhuus aan de Berg- en Dalseweg. Terwijl ik volop 'participeerde' in het studentenleven, zat ik vaak na een korte nacht vroeg op de fiets voor groepsopdrachten over participatie en alledaagse activiteiten die niet voor iedereen zo vanzelfsprekend waren als voor mij. Na het afstuderen en een aantal jaar gewerkt te hebben als ergotherapeut op de Revalidatie afdeling in het Radboud UMC, wilde ik 'meer': ik begon aan de parttime master Public Health in Maastricht waar ik leerde over gezondheidsbevordering en gedragsverandering. Twee thema's sprongen er altijd al uit, zowel in mijn werk als studie en dat waren inclusie en participatie vraagstukken van mensen met beperkingen, en hoe die er dan uit zien in de Nederlandse maar ook de internationale context, vooral in ontwikkelingslanden. In de jaren na de master schreef ik diverse publicaties, met veel dank voor het vertrouwen dat ik kreeg van Edith, Ernst, en Marleen als beginnend onderzoeker. Ondertussen kwam de functie als promovendus op de Hogeschool van Arnhem en Nijmegen voorbij. Arbeidsparticipatie, daar had ik me als ergotherapeut vaak in de spreekkamer mee bezig gehouden, en wat een mooie kans om dit verder te onderzoeken, in mijn geliefde stad Nijmegen. De reis van het promoveren was begonnen...

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"There's no feeling like finishing a book, and I'm proud of this one." - Mr Obama





## List of publications

### In this thesis

- van Hees SGM, Carlier B, Blonk RW, Oomens S. Understanding work participation among employees with common mental disorders: What works, for whom, under what circumstances and how? A systematic realist review protocol. *Work*. 2021;69(3):827-838.
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### Manuscript submitted for publication

- Van Hees SGM, Carlier BE, Joosen MCW, Blonk RWB, Oomens S. (Submitted, under review). A workplace intervention to strengthen supervisor support for employees with common mental health problems: a mixed methods realist evaluation.

### Dutch articles about this research project

- Vossen E, Carlier B, van Hees S, Oomens S. Blijven werken met psychische klachten en een lage sociaaleconomische status. *Tijdschrift voor Arbeidsvraagstukken*, 2021;37(2), 205-232.
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