Pirjo Juvonen-Posti

WORK-RELATED REHABILITATION FOR STRENGTHENING WORKING CAREERS

A MULTIPERSPECTIVE AND MIXED METHODS STUDY OF ITS MECHANISMS
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Work-Related Rehabilitation for Strengthening Working Careers
A multiperspective and mixed methods study of its mechanisms

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Abstract
Coping at work and job retention have been on the list of priorities of European countries for some decades. Vocational rehabilitation is a key measure for preventing work disability, but its possibilities have remained unused in many respects. Moreover, rehabilitation tasks are defined differently depending on the perspective taken.

The purpose of this thesis is to determine the possibilities that arise from defining work-related rehabilitation tasks in a way that combines different perspectives and interests. The research questions are: 1) What were the impacts on working career and psychosocial factors of an intervention for long-term unemployed people with disabilities? 2) What kind of processes and mechanisms promoted the working careers and other outcomes of the employed people during the interventions? 3) What forms of collaboration took place between the rehabilitees and different stakeholders, and to what extent did the rehabilitees have opportunities to choose and act during the process?

The empirical data for the study were collected from two vocational rehabilitation research projects. The research design was a multiple case study from multiple perspectives combined with mixed methods. The materials were collected through surveys, individual and group interviews, documents, and register follow-up.

We found the contextual mechanism through which the outcomes of the work-related rehabilitation emerged. The process was promoted or hindered by actions taken by all stakeholders. The promoting or hindering mechanisms were born through the actions taken by the supervisor in particular, the occupational health service and rehabilitation service provider, and the individual’s life situation factors. Similar factors promoted and hindered the re-employment and staying or returning to work outcomes. Enhancing the rehabilitees’ own agency is also important, regardless of how weak it is at the beginning. I also present a new way of assigning rehabilitation tasks, which structures the complexity of the field of work-related rehabilitation and helps manage it.

Work-related rehabilitation is a combination of societal and individual actions. The results of this study will help all actors involved in rehabilitation to improve the outcomes of work-related rehabilitation by developing opportunities for the rehabilitees’ own agency and collaboration

Keywords: agency, case study, collaboration, evaluation research, follow-up, intervention/programme, long-term unemployment, mechanisms, mixed methods, multiperspective, outcome, process evaluation, qualitative research, rehabilitation, stakeholders, triangulation, vocational rehabilitation, work ability, work disability
Tiivistelmä

Työurien jatkaminen on keskeinen eurooppalaisen yhteiskuntien selviämisen haaste. Kuntoutus on riittämättömästi hyödynnetty resurssi työurien pidentämiseksi. Lisäksi kuntoutuksen tehtävät määrittyvät eri näkökulmasta eri tavalla.

Tutkimuksen tavoitteena on tarkastella, miten työikäisten kuntoutuksen tehtävää voitaisiin määritellä eri toimijoiden intressejä ja päämääriä yhdistäen. Tutkimuskysymyksiä oli kolme: 1) Mitkä olivat monimuotoisen ammatillisen kuntoutuksen vaikutukset pitkäaikaistyötön työuraan ja muihin psykososiaalisiin tekijöihin? 2) Millaiset prosessit ja mekanismit edistivät työuria työllisten monimuotoisen ammatillisen kuntoutuksen interventionossa? 3) Minkälaisia yhteisömuotoja työhön kytkeytyvää kuntoutuksessa kuntoutujan ja eri toimijoiden välillä toteutui, ja missä määrin kuntoutujat pystyivät vaikuttamaan omiin valintaa ja toimintamahdollisuuksiinsa prosessin aikana?


Työhön kytkeytyvä kuntoutus muodostaa yhteiskuntauhan ja yksilöön kohdistuvaa toimintaa, joilla mahdollistetaan työelämään paluu ja osallistuminen. Tulosten avulla kuntoutuksen toteutustutkimat, tutkijat ja viranomaiset voivat parantaa kuntoutuksen työura vaikutuksia kehittelemään kuntoutujan osallistumismahdollisuuksia ja yhteistoimintaa.

Asiasanat: ammatillinen kuntoutus, arviointitutkimus, intervention/ohjelma, kuntoutus, laadullinen tutkimus, mekanismin, monimenetelmällinen, osallinen/osallistuva taho, pitkäaikaistyötön, prosessiarvointi, seurantatutkimus, tapaustutkimus, toimijuus, triangulaatio (moninäkökulmaisuus/-paradigmaattisuus), tulos, työkyky, työkyvyttömyys, yhteistoiminta
To my daughter Jarna

"... te olette muuttaneet lapsen, niin että hän on pahempi kuin Pikku Myy. Mutta pääasiahan on, että hän näkyy."

"... you have brought up the child so that she turned to be worse than Little My. But the most important thing is that she is visible."
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### Abbreviations and definitions

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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ASOC-13</td>
<td>13-item version of Antonovsky’s SOC</td>
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<td>CP</td>
<td>Cerebral palsy</td>
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<td>GHQ-12</td>
<td>12-item General Health Questionnaire</td>
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<td>HR</td>
<td>Human resources</td>
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<tr>
<td>ICF</td>
<td>International Classification of Functioning</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>IPS</td>
<td>The integrated placement and supported employment – model</td>
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<td>OH</td>
<td>Occupational health</td>
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<td>OHS</td>
<td>Occupational health service(s)</td>
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<tr>
<td>RCT</td>
<td>Random control trial</td>
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<tr>
<td>RTW</td>
<td>Return to work</td>
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<tr>
<td>QCA</td>
<td>Qualitative comparison analysis</td>
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<tr>
<td>SAW</td>
<td>Staying at work</td>
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<tr>
<td>TBI</td>
<td>Traumatic brain injury</td>
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<tr>
<td>VAS</td>
<td>Visual analogue scale</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>WSPS</td>
<td>Wallston’s Self-Performance Survey</td>
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A complex intervention (Graig et al. 2008) consists of:
- a number of interacting components within experimental and control interventions;
- a number of difficult behaviours required by those delivering or undergoing the intervention,
- a number of targeted groups or organisational levels,
- a number of and variable outcomes,
- a permitted degree of flexibility or tailoring.

The general definition of mixed methods research (Johnson et al. 2007):
A researcher or a team of researchers are combining elements of qualitative and quantitative approaches for the broad purposes of widely and deeply understanding and corroborating.
List of original publications


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1 Introduction

Coping at work and job retention have been on the list of priorities of European countries for some decades. The workforce is ageing, the dependency ratio is becoming disadvantageous, and the funding and structure of social security is facing huge changes. In Finland, a smaller amount of people is entering the labour market than the amount that is leaving it. Extending working careers is seen as a key challenge to the survival of Finnish society, and the role of work ability and work disability in this issue is significant.

Work ability and disability are complex phenomena (Järvikoski 1994, Järvikoski et al. 2001, Loisel et al. 2005, Ilmarinen et al. 2008). The factors related to individuals, work, workplaces, social security, and compensation systems; and the availability and competence of health and rehabilitation professionals are interconnected through different combinations, and they affect the outcome of the implementation of interventions in areas such as return to work (RTW)(Franche et al. 2005ab, Fassier et al. 2015). Interventions for promoting work ability and preventing disability are complex (Craig et al. 2008, Moore et al. 2015, Fletcher et al. 2016).

Vocational rehabilitation is one of the key measures in preventing prolonged or permanent work disability in western countries. The opportunities that rehabilitation provides for supporting working careers have remained unused in many respects, and vocational rehabilitation interventions often come too late (Loisel et al. 2003, Waddell & Watson 2004, Waddell et al. 2008, Kuoppala & Lamminpää 2008, Suikkanen et al. 2010, Blomgren et al. 2011, Gould et al. 2012 ab, Pensola et al. 2012, Laaksonen et al. 2014, O’Neill et al. 2015). Biased selection for vocational rehabilitation has been reported: vocational rehabilitation seems to be more accessible in permanent, full-time, middle-sized and large-scale workplaces, i.e. access to vocational rehabilitation among the unemployed, entrepreneurs and non-permanent employees is inadequate (Juvonen-Posti & Pensola 2016). Burström et al. (2011) reported that men, younger people, those on longer-term sick leave, those with lower incomes, and the employed were more likely to be selected than unemployed people and those with musculoskeletal and mental disorders or alcohol abuse. Although selection for vocational rehabilitation is perceived as important for successful outcomes, success seems to also depend on the state of the local labour market. Poor access to rehabilitation implies extended periods of sick leave, to the detriment of the individual, the employer and society (Burström et al. 2011). According to Pensola et al. (2012) and Laaksonen et al. (2014), studies on selection
for rehabilitation have been insufficient, often based on the need for rehabilitation from the work ability and disability risk perspective, or on large socio-economic differences in the selection process. Rehabilitation mostly benefits those who have underlying disease and mood symptoms, and those who are aware of their own health problems (Pasternack et al. 2015).

The vocational rehabilitation process is a complex intervention in a complex system. However, as already mentioned, little is known of the collaboration within the action networks of unemployed and employed rehabilitees’ vocational rehabilitation intervention processes, or of the role that collaboration plays in the outcome mechanisms of these interventions. The purpose of my thesis is to determine the possibilities of defining work-related rehabilitation tasks in a way that combines different perspectives and interests. I do this by studying multimodal collaboration and agencies in the implementation of vocational rehabilitation processes for both unemployed and employed people with disabilities.

This thesis consists of six main chapters. The first chapter is a short introduction to theme of the dissertation; it outlines the research problem and presents the structure of the dissertation. Chapter two presents the concepts and literature review as a theoretical background by defining terms or phenomena such as vocational rehabilitation, work-related rehabilitation, social intervention in a complex system, collaboration, and agency. The literature of the thesis consists of systematically compiled literature on each research project and their scientific publications. Only some of this literature is presented here. The choice of literature was guided by the research questions and results of the thesis. Chapter three presents a summary of the theoretical foundation, the objectives and scope of the dissertation and the three research questions. Chapter four presents the materials and methods, the methodological foundations of the research and the realisation of this research. I present my results in Chapter five: first, Research question 1 results: the impacts on working career and other factors; second, Research question 2 results: the processes or mechanisms that promote the working career and other outcomes; and third, Research question 3 results: the forms of co-operation and rehabilitees’ opportunities to choose from different options and to act. In Chapter six the results are discussed through the theoretical background and literature. This chapter also includes discussions on ethical issues, the reliability and validity of the study, theoretical and practical implications, and recommendations for further research.
2 Concepts and literature review

2.1 Complexity in vocational rehabilitation

Work ability and disability are key concepts in vocational rehabilitation. However, work (dis)ability has no single common definition. Its definitions and conceptualisations vary according to their purpose, their context of emergence, their epistemological assumptions, discipline, underlying paradigm and relationship to time. (Lederer et al. 2014). Though scientific literature does not reflect an integrated vision of the nature and dimensions of work (dis)ability there seems to be shared understanding that work (dis)ability is a relational concept that results from the interaction of multiple dimensions which influence each other through different ecological levels. Dynamism has also become part of the conceptualisations of work (dis)ability over time (Lederer et al. 2014). The important factor is the paradigm shift from a biomedical model to a disability paradigm which considers a person’s broader situation (Järvikoski 1994, Järvikoski et al. 2001, Loisel et al. 2005, Ilmarinen et al. 2008), i.e. living and working context and participation in work. By emphasising social rather than biomedical factors, Seing et al. (2012) point out that both the work ability and work disability concepts are socially constructed, and are undergoing change as their social context, i.e. society, is changing. Sustainable employability (van der Klink et al. 2016) is a parallel concept, because it defines employability as action, which is realised in a practical situation(s), i.e. in a certain context(s). Researchers describe the social contextual factors in more detail: they claim that sustainable employability means that people have working conditions that enable them to offer valuable work input while safeguarding their health and well-being. This requires certain working conditions, attitudes and motivations, through which it is possible to take advantage of these opportunities. (van der Klink et al. 2016). They strongly define the ability to work as a dynamic relationship between the individual and the working environment.

We have no common definition of vocational or occupational rehabilitation and in Finland, for example, the definition varies from one rehabilitation organiser to another (Miettinen 2011). In its Declaration of Vocational Rehabilitation and Employment (Disabled persons) in 1983, the International Labour Organization (ILO) defined vocational rehabilitation as follows: ‘The purpose of vocational rehabilitation as being to enable a disabled person to secure, retain and advance in suitable employment and thereby to further such person’s integration or reintegration.
into society. The disabled person means an individual whose prospects of securing, retaining and advancing in suitable employment are substantially reduced as a result of a duly recognised physical or mental impairment.’ According to this definition, the target of vocational rehabilitation is to integrate or reintegrate individuals into society by placing them into the labour market despite their disabilities. One conceptual definition of vocational rehabilitation is based on the biopsychosocial approach to work ability, according to the systematic classification framework of the International Classification of Functioning (ICF), and sees a new measure as helping to build a shared global model (Escorpizo et al. 2011): ‘Vocational rehabilitation refers to a multiprofessional approach that is provided to individuals of working age with health-related impairments, limitations, or restrictions with work functioning and whose primary aim is to optimise work participation.’ Escorpizo et al. pinpointed five essential elements for this conceptual definition of vocational rehabilitation: engagement or re-engagement in work, a long work continuum, the health conditions or events leading to work disability, patient-centred, evidence-based, and multiprofessional or multidisciplinary practice (Escorpizo et al. 2011). Though the target of the action is the labour market, work and workplaces, this definition repeats the long history of the individual-based (patient), medical model of vocational rehabilitation. In Western developed countries, the model of insurance, for example, the access criteria for vocational rehabilitation through an assessment of the need for vocational rehabilitation made by a health professional, depends without exception on the medical model, and the medicalisation of the disability (Harder & Scott 2005).

Despite the theoretical development of the concept of work ability in many western countries, it is the medically-oriented model of thinking about how things change in vocational rehabilitation that guides the practice of rehabilitation. This is based on assessing an individual’s work disability to the extent required. Moreover, despite holistic and resource-based approaches, that see individuals as bio-psycho-social entities, and abilities and resources in addition to disabilities (WHO 2001, Hakanen et al. 2006), the various legal concepts of social security tend to rely on medical justification. This is clearly seen in the recent definition of work disability by Stucki et al. (2015) which states that work disability refers to a person’s inability to work due to an illness or injury and does not consider the influence of contextual factors. This assessment is the key element in assigning people with disabilities to appropriate medical and vocational rehabilitation programmes. According to this kind of theory of change, the aim of a study or evaluation is to show whether the programme was effective and whether work participation was enhanced or achieved, while ignoring the context and the underlying processes.
The starting point of the ICF-based biopsychosocial model is the individual’s need for rehabilitation, and multiprofessional rehabilitation support refers to support given by social and health care and (medical) rehabilitation professionals, even in cases of re-employment, staying at work (SAW) or returning to work (RTW). However, this leaves out the actors in the workplaces, for example.

One effort to define vocational rehabilitation in a more integrated way, and to enable the agency of working life and its actors alongside the medical expertise, is the definition of Waddell et al. (2008): ‘Vocational rehabilitation is whatever helps someone with a health problem to stay at, return to and remain in work.’ This definition also extends to the mission of vocational rehabilitation: it becomes an idea and an approach as much as an intervention or a service.

The model that has challenged traditional thinking in vocational rehabilitation since the 1990s is that of integrated placement and supported employment (IPS), the ‘place and train’ model in short (Härkäpää 2000, Bond 2004, Härkäpää & Peltola 2005, Burns et al. 2007, Spjelkavik 2012, Krupa et al. 2015). The IPS model fundamentally differs from the traditional ‘train and place’ vocational rehabilitation approaches in a few of its principles. IPS focuses on accessing, supporting, and creating real work opportunities and on making access to work possible for anyone who aspires to work. In addition, according to IPS principles, work participation should be based on individual preferences and choice. Any treatment and services needed, including employment support, should be delivered in an integrative way with vocational rehabilitation (Krupa et al. 2015). Although several studies have indicated that supported employment is a successful approach to help disabled job-seekers obtain and keep a job in the ordinary labour market, supported employment is typically provided as an ‘added-on’ service to traditional forms of vocational rehabilitation (Krupa et al. 2015).

The realisation of multiorganisational rehabilitation in practice, and the division of labour between different rehabilitation subsystems have proved to be challenging (Miettinen 2011, Rajavaara 2013, Liukko & Kuuva 2015), and the intricacy of rehabilitation systems makes it possible to drop out of the process (Ashorn et al. 2013). The complexity of the possible macro processes in vocational rehabilitation is condensed in Lindh’s (2013, 2014) description of vocational rehabilitation as a social system, action network and collaboration. This action network-based vocational rehabilitation system constitutes four entities. The first is the situated actions in [vocational] rehabilitation, i.e. the practices and processes of rehabilitation, the encounters of clients and professionals. The second entity consists of the [vocational] rehabilitation system, i.e. institutional
and organisational resources and sanctions. Individuals have working life capacity, i.e. an individual’s working capacity, professional and other competences, work ability and disability. Life situation constitutes the third entity. The fourth entity is the labour market, i.e. the structure and dynamics of labour. Each of these entities interact with each other in the action network, and the social operational system defines the implementation, through legislation and other boundary conditions such as institutions, professionals and practices. The regional and local operational system, in turn, operates under these conditions and boundaries as a network of activities in its own social and cultural context, produced from the encounters of clients’ and professionals’ activities and actions.

I will continue to use the term work-related rehabilitation instead of vocational or occupational rehabilitation in order to emphasise that work-related rehabilitation aims to intervene (1) both by preventing and by maintaining and restoring work ability and the working career, keeping work-related issues in focus (see Waddell et al. 2008) (2) at work and at the workplace, and (3) by including the required work and labour actors, the different workplace actors (managers, HR specialists, supervisors, occupational health and safety personnel, shop stewards, work colleagues), employment offices (managers, career advisors, job-seekers, other experts, fellow job-seekers) in the implementation of the rehabilitation. Moreover, in work-related rehabilitation, the concepts of work ability and work disability are socially constructed (Seing et al. 2012, Lindh 2014). The interventions take into account the contextual dynamic relationship between the individual and the work environment, aiming for sustainable working careers (see van der Klink et al. 2016).

2.2 Work-related rehabilitation as a social intervention in a complex system

According to the holistic and systemic view of work ability, a wide variety of stakeholders, i.e. employees, employers, occupational health service (OHS) providers, and insurance and rehabilitation service providers are invited to participate in and are involved in the implementation of work-disability and work-related rehabilitation processes (Loisel et al. 2005). A work-related rehabilitation process can be understood as a social intervention in a complex system (MacEachen 2013); in which the context of the intervention is of great importance. During the rehabilitation process, a rehabilitee enters discussions on health, work ability, individual needs and features (Ylilahti 2014), and especially on the relationship
with one’s own work, workplace actors, and professional and working career prospects (Seppänen-Järvelä et al. 2015b). In this sense, inter-organisational and inter-professional communication, co-operation and integration are vital components in work disability management; they are both obstacles and facilitators (Andersson et al. 2011). They are also essential in the implementation of work-related rehabilitation.

In work-related rehabilitation, social interaction takes place in a certain kind of arena or on a stage (Loisel et al. 2005), where different actors have their own roles, expectations and goals that reflect the nature of the interaction. Interaction and agency are multidirectional with multiple levels, connected to both actors and people. For example, in work-related rehabilitation, a rehabilitee is not only a private person, but also an employee, a member of a work community and a representative of the employer (Seppänen-Järvelä et al. 2015b). The contextual interaction of work-related rehabilitation creates a social activity that, on the one hand, forces operators, and on the other hand, creates opportunities for them (Mattila-Aalto 2013).

Although the clarity of the roles and tasks of those involved in the collaboration of the work-related rehabilitation process facilitates the rehabilitee’s process, it does not necessarily guarantee a successful rehabilitation process (see Chamberlain et al. 2009). The various stakeholders (employee, employer, (social) insurance, healthcare provider, society) in the RTW process have different goals, motivations, interests and types of work-related issues, but they are all interested in the person returning to work in a suitable and permanent manner. Various stakeholders are interested in the factors that support the return of an employee to work and they want to know the benefits of the RTW. Many actors want to know if the process of returning to work is followed satisfactorily. (Young et al. 2005) In complex work-related rehabilitation processes, different paths for better interaction with employees and their supervisors or employers may play a decisive role in improving work participation results (Costa-Black et al. 2013).

Various stakeholders are invited to collaborate in the work-related rehabilitation processes, and this sets special challenges to service provision and interaction during the process: how can the actors work together to achieve such complex goals when dealing with private health- and life situation-related information that cannot be shared with all the stakeholders involved, as well as public work-related issues (see Geisen 2015)? The structures and processes of vocational rehabilitation also have many factors that may become obstacles to collaboration (MacEachen 2013).
2.3 Rehabilittee’s agency, shared agency and collaboration

There are many different interpretations of human agency. One concept of agency is based on sociologist Giddens’ (1984) theoretical foundation of the dialogue between structure and action. According to Giddens, agency requires the actor to have the power and autonomy to choose from different options. In his view, agency means the power to influence the course of events (Lindström 2011, Eteläpelto et al. 2014). The relevance of Giddens’ concept of agency in vocational rehabilitation is seen, for example, in the difference of the structures of vocational rehabilitation for the employed and unemployed.

Agency is also understood as human activity in relation to situations, environments and structures. People build their own life course in relation to social environments, within the possibilities and the limits they offer (Hiltlin & Elder 2007), including their professional and working career. Work-related rehabilitation can be considered a transitional mode (Kontinen et al. 2013), which enables searching for and implementing new choices and solutions for one’s life course and working career. This building and reorienting requires agency (Hiltlin & Elder 2007). In the context of rehabilitation, discussion on the concept of agency has often been based on Bandura’s (2001) description of the four aspects of agency: intentionality, forethought, self-reactiveness (self-regulation), and self-reflectiveness (beliefs of efficacy). The individual’s beliefs about their own ability can either strengthen or limit their agency, as well as determine how they respond to challenges and failures (Bandura 2001). Moreover, in vocational rehabilitation, the rehabilitee’s motivational orientations are associated with their experiences and their perceptions of environmental factors and future possibilities; in the work-related rehabilitation process it is important to determine what factors may be hiding behind rehabilitees’ weak contextual or situational motivation, to discuss these factors in order to alleviate uncertainty regarding change, and to enhance motivation to participate in rehabilitation and re-think future prospects regarding returning to work (Härkäpää et al. 2014). This is especially important for people or rehabilitees who do not have strong working life agency and readiness or activity to change their own way of life (Seppänen-Järvelä et al. 2015b).

According to Hitlin & Johnson (2015), subjective agency involves two central components: perceived capacities and mastery on the one hand, and perceived life changes on the other. In empirical research, subjective agency has most often been operationalised by measures of self-efficacy (Bandura 2001), personal mastery (Pearlin & Schooler 1978), or personal control (Mirowsky & Ross 2007). Perceived
competence (Smith et al. 1991, Smith et al. 1995, Wallston et al. 2011), which is defined as a person’s perceived ability to accomplish things that they regard as important, is a measure of generalised self-efficacy.

In addition to the rehabilitees’ own agency, shared agency also emphasises the role and tasks of all the other stakeholders involved in the process, during which commonly planned objectives and decision-making, commitment to co-operation, shared responsibility and support should occur (Järvikoski et al. 2013, Salminen et al. 2017). Shared agency, providing knowledge, guidance and support, and rehabilitee-driven processes are not always realised in the desired way (Gould et al. 2012ab, Härkäpää et al. 2014). A genuine collaborative process emphasises the development of reciprocal interaction and partnership throughout the process, when it qualitatively differs from, for example, co-operation or acting together (Harra 2014). The rehabilitees’ active personal agency, their readiness (motivation) for work-related rehabilitation and shared agency with the stakeholders of the process is the key to a sustainable rehabilitation outcome (Hitlin & Elder 2007, Järvikoski et al. 2013).

Discussion on collaboration and the concept of shared agency involves the views of both service users, i.e. rehabilitees, and professionals. Collaboration has also been studied as part of the structure in organising and providing vocational rehabilitation services. Andersson et al. (2011) classified collaboration in vocational rehabilitation, from professional and organisational standpoints, into seven different organisational models: information exchange, case co-ordination, interagency meetings, multidisciplinary teams, partnership, co-location, and pooling of budgets. Each of these bring different degrees of complexity, intensity and formalisation, and can be seen as collaboration strategies that can be combined in different ways. However, macro-level models (e.g. pooled budget) have to be combined with actual collaboration on client-work (micro level). As mentioned above, different processes of vocational rehabilitation require different models of collaboration, and the same target group need different models in different phases of rehabilitation. Even if the organisational model of collaboration was designed after the collaborative advantages, service users may not have been aware of existing collaboration (Andersson et al. 2011). The recognised facilitators and obstacles to collaboration in vocational rehabilitation are connected to the communication and trust (Ståhl et al. 2010) between professionals and organisations involved, and territoriality and leadership (Andersson et al. 2011).
2.4 Outcomes of vocational rehabilitation for work, workplace and working career

The effectiveness of vocational rehabilitation has been measured by employability; health and work (dis)ability; reduction of disability pensions or sickness absences, from the perspective of the individual, workplace, company, or society; and economic effects from the standpoint of the workplace, company and society (Tuomala 2012), but traditionally through the reduction of sickness absence days or work disability (Kärrholm 2006). Recently, because of both the prevention of work disability and the need to extend working careers in developed countries, new earlier onset models of work-related rehabilitation for job retention have been created (Waddell et al. 2008). The timing of the work-related intervention also challenges the outcomes used to evaluate its effectiveness.

The effects of vocational rehabilitation interventions on RTW are well reported (Franche et al. 2005a, Franche et al. 2005b, MacEachen et al. 2006), whereas the different effects of early interventions on job retention are contradictory or controversial (Franche et al. 2005b, Franche et al. 2007, Saltychev 2012, van Vilsteren et al. 2015, Williams-With et al. 2016). Although well-designed effectiveness studies have shown results, it is still hard to show, for example, employment (SAW, RTW, deployment, re-employment) outcomes, what part of this outcome has been affected by the vocational rehabilitation in a complex context (Tuomala 2012).

Vocational rehabilitation measures have not been sufficiently linked to work or the workplace. They have not sufficiently supported job retention among people with work disabilities, have not been sufficiently work-oriented and have not supported the employability of unemployed job-seekers with work disabilities (Waddell et al. 2008, Ylisassi 2009, Suikkanen et al. 2010, Härkäpää et al. 2013, Lindh 2013, 2014). RTW research has found work- and workplace-related measures that can either enhance or hinder an employee’s RTW and SAW. Work accommodations, early contact with the absent employee, ergonomic worksite visits, and the possibility of an RTW co-ordinator’s services at the workplace (Franche et al. 2005b; Shaw et al. 2008) are examples of workplace-based RTW interventions that can reduce work disability duration and its related costs.

Impact studies of vocational rehabilitation in the United States show positive impacts, whereas Nordic evaluations, for example, have varying results and clearly show more negative impacts. An explanation for the differences in the impact of vocational rehabilitation has been sought through differences in systems, in
rehabilitation models and methods of implementation (Gould et al. 2012 ab). A study of vocational rehabilitation organised by the earnings-related pension-scheme in Finland showed that participation in vocational rehabilitation did to some degree increase the likelihood of continuing in employment in a one-year follow-up (Tuomala 2012). Good subjective work ability, strong self-efficacy, and a lack of orientation towards retirement predicted a successfully completed vocational rehabilitation process, as well as employment after the vocational rehabilitation. If the rehabilitee had been unemployed prior to the decision regarding vocational rehabilitation, the risk of dropping out grew and the likelihood of participation in work, and re-employment, decreased. A well-functioning vocational rehabilitation process promoted a good rehabilitation outcome. A timely start, correspondence between the rehabilitee’s own wishes and the vocational rehabilitation measures granted, the rehabilitee’s power to influence the vocational rehabilitation process at different stages, and smooth overall progress of the rehabilitation all served as predictors of job retention after the vocational rehabilitation (Gould et al. 2012 ab).

Lindström et al. (2009) in Sweden showed that for people with traumatic brain injury (TBI), factors such as believing in work and having the support of significant others were more important determinants of success in RTW than the stroke-specific deficit. Huang et al. (2013) in the United States found that among adults with cerebral palsy (CP), males aged between 26–54 with higher education were more likely to be employed and that those with disability benefits were less likely to be employed. Of 16 different rehabilitation service models studied, the following five rehabilitation services significantly predicted employment outcomes (1) on-the-job training; (2) job placement assistance; (3) on-the-job support; (4) financial support in expenses of food, shelter/accommodation, clothing etc., and (5) rehabilitation technology. The researchers underlined the importance of vocational rehabilitation services in maximising the employability of people with CP (Huang et al. 2013). In the United Kingdom, for those who were working prior to their TBI, around 41% were working one and two years later. Although evidence suggests that vocational rehabilitation may increase RTW rates, this evidence is not robust (Radford et al. 2013). These researchers also pointed out that more detailed reporting of vocational interventions is needed to inform clinicians and services (Phillips & Radford 2014).

Markussen and RØed (2014) in Norway found, on the basis of longitudinal administrative register data and using temporary disability insurance occurrence as the main outcome, that vocational rehabilitation strategies that start out quickly through placement in the regular labour market tend to be the most successful.
Campolieti et al. (2014) estimated the effects of the vocational rehabilitation programme run by the Canada Pension Plan Disability Program, also using administrative data that focused on the labour market outcomes of disability beneficiaries. They found that the programme improved the labour market outcomes of women enough to pass a cost-benefit test from the perspective of the programme. However, the result was not the same for men.

A Swedish study of early outcome predictors of vocational rehabilitation examined a sample of unemployed people with a somatic disorder as the reason for vocational rehabilitation. At two-year follow-up, 40% were working or employable. Of about 30 variables, having a relatively high belief in vocational return, a relatively high sense of coherence, and a relatively high educational level were significant predictors of a positive outcome (Melin & Fugi-Meuer, 2003).

Specific matching of vocational rehabilitation to the needs of the individual, and careful selection of individuals may increase the effectiveness of vocational rehabilitation interventions. Holding a coordination meeting with different rehabilitation actors for people on long-term sick leave has increased the probability of an active rehabilitation measure being initiated five-fold, and doubled the probability of the adaptation being initiated at the workplace (Buström et al. 2011).

As discussed earlier in Section 2.2, work-related rehabilitation is a complex social intervention, and the context of its implementation is often also complex. Tate (1992) classified the factors affecting the outcome of vocational rehabilitation into six groups: 1) the quality of the service system, 2) the conditions and attitudes of the labour market, 3) employers’ policies, 4) vocational rehabilitation services, 5) the characteristics of the employee and the rehabilitee, and 6) factors related to the community (e.g. attitudes and economics). The most studied of the factors listed above are different rehabilitees’ attributes and their significance for the rehabilitation outcome (Gould et al. 2012 ab). The issues Tate classified can also be identified in Loisel’s arena of work disability (Loisel et al. 2005). Tate did not classify collaboration during the rehabilitation process and between different stakeholders as its own entity. MacEachen (2013) challenges researchers and research for a better understanding of work (dis)ability and vocational rehabilitation systems, and intervening upstream, thereby having the potential to make a positive impact on many employees.
3 Objectives, scope and research questions

Work-related rehabilitation is a multilevel entity; first, it is an individual process of change or a chain of rehabilitation services and actions; second, it is an entity of multidisciplinary measures (work-related rehabilitation services and service activities); third, it is a national social system with action networks and collaboration across all levels (work-related rehabilitation system and its functioning in regional and local contexts). The system of work-related rehabilitation is complex and constantly undergoing changes.

Work-related rehabilitation is still structured and implemented in a system-centred and professionally-oriented manner. Professionals consider the need for rehabilitation and the benefits of rehabilitation from their own, potentially narrow point of view, and regard the rehabilitee’s and other stakeholders’ perspectives as less important. In current practice, this means that the rehabilitee’s situation is always viewed from a different perspective when they move from one system to another or from one expert to another. It can be assumed that such a method has a negative impact on the overall benefit of rehabilitation for a rehabilitee, on the support needed during the rehabilitation process, and on the working career outcomes of the rehabilitation. However, in accordance with this system- and professionally-driven mode of operation, different professions have been given significant power to identify the need for rehabilitation and to control and choose the possible service options. For this reason, work-related rehabilitation is not sufficiently contemplated from the perspective and needs of a rehabilitee, as a multidisciplinary entity of measures that require multifaceted activities and collaboration between different professionals and stakeholders. It can also be assumed that the current outline possibly weakens both the rehabilitee’s work-related rehabilitation services and the whole process (access/selection, interception/interruption, targeting), the support needed during rehabilitation, and the working career and other outcomes of work-related rehabilitation.

The purpose of this thesis is to determine the possibilities of defining the tasks of work-related rehabilitation in a way that would combine different perspectives and interests by studying the empirical data of two work-related rehabilitation research projects. Another aim is to discover the facilitators of and obstacles to work-related rehabilitation processes and the mechanisms through which working career outcomes are generated by studying multimodal collaboration and agencies in the implementation of two work-related rehabilitation processes, and the working career outcomes for both unemployed and employed people with disabilities.
working career outcomes and the effects of vocational rehabilitation are monitored as group averages and, through return to full-time work or a reduction of sickness absence and/or permanent work disability, ignore other types of change. This study also looks more closely at the changes in work that are usually ignored.

On this basis, I formed the following three research questions:

- **Research question 1 (RQ1):**
  What were the impacts on working career and psychosocial factors of a multimodal vocational rehabilitation intervention for long-term unemployed people with disabilities?

- **Research question 2 (RQ2):**
  What kind of processes and mechanisms promoted the working careers and other outcomes of employed people during multidisciplinary collaborative vocational rehabilitation interventions?

- **Research question 3 (RQ3):**
  What forms of collaboration were realised between rehabilitees and different stakeholders, and to what extent did the rehabilitees have opportunities to choose and act during the vocational rehabilitation process?

The research questions are answered in *four sub-studies* (Articles I–IV, see Table 1). The data for the sub-studies were collected from two evaluation research projects. The *material for Sub-studies I and II* was gathered during a developmental ‘Pathway-to-Work’ project of the Oulu University Hospital (1995–1998). The project was targeted towards middle-aged long-term unemployed people (N = 140) with various disabilities, and aimed to tailor RTW plans for all participants, and get half of them into work or training. The material for *Sub-studies III and IV* was gathered during a developmental project called *Work-related rehabilitation II* conducted in 2012–2014 by The Social Insurance Institution of Finland. This project developed a new collaborative way of conducting vocational rehabilitation for employees with disabilities. Close collaboration with employers, employees, OHS and rehabilitation service providers was one of the key elements in this concept. In addition, the rehabilitation had to be flexible and correctly timed in terms of both the individual’s and employer organisation’s needs.

Research question 1 is answered by Sub-studies I and II (Journal article I and II, later referred as article) and research question 2 is answered by Sub-studies III and IV (article III–IV). Research question 3 is answered with the sub-study I, II, III, and IV. Table 1 illustrates how the research questions are answered by the sub-studies.
Table 1. Research questions 1–3 and how they are answered by the Journal sub-studies.

<table>
<thead>
<tr>
<th>Research question</th>
<th>Sub-study I</th>
<th>Sub-study II</th>
<th>Sub-study III</th>
<th>Sub-study IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RQ2</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>RQ3</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

The aims of Sub-studies I–IV are summarised in Table 2.
4 Material and methods

4.1 Research settings

Sub-studies I and II. The Pathway-to-Work developmental project was targeted towards middle-aged, long-term unemployed people with various disabilities. These job-seekers’ need for vocational rehabilitation was recognised and defined at the employment office. The multistage intervention was composed of a multidisciplinary work ability assessment at the Rehabilitation Unit of the University Hospital, training, work try-outs and subsidised jobs, which altogether required 10 months of full-time attendance per participant on average. Sub-study I concentrated on evaluating the employment and psychosocial outcomes of the intervention during the two-year follow-up. Sub-study II focused on examining the rehabilitation paths of eight participants and the changes in the psychosocial quality of life among the subgroups that took paths to work, training, work try-outs, or further work (dis)ability assessments.

The ethical review of Sub-studies I and II was carried out by the ethical board of the Regional Ethics Committee of the Northern Ostrobothnia Hospital District (The statement of the Ethics Committee 10/2001, 25th January 2001.). All the procedures in the studies that involved human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from the study participants.

Sub-studies III and IV were part of the Work-related rehabilitation II development project (Seppänen-Järvelä et al. 2015a), which developed a new way of conducting vocational rehabilitation for employees with disabilities. This work-related multidisciplinary rehabilitation intervention aimed for close collaboration among all stakeholders. The focus of each of the rehabilitation processes was defined at the workplaces; first the employer representatives defined the need for rehabilitation, then the employer’s OHS carried out a work ability assessment of the selected target population. The multistage intervention comprised 10–15 group session days and 3–8 individual visits or collaborative meetings over 10–12 months. (See also Fig. 2).

Sub-study III concentrated on analysing what kind of co-operation took place between the 10 workplaces and their OHS, how multiagency co-operation succeeded, and what consequences this had for rehabilitation. Sub-study IV focused
on determining the mechanisms and pathways that promoted job retention among 11 rehabilitees.

The ethical review of Sub-studies III and IV was carried out by the ethical board of The Social Insurance Institution of Finland: the statement of the Ethics Committee was made on the 11th June 2012. All the procedures in the studies that involved human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The study participants gave their informed consent.

Table 2 presents a summary of Sub-studies I–IV.
<table>
<thead>
<tr>
<th>List of content</th>
<th>Pathway-to-Work project for long-term unemployed people</th>
<th>Work-related vocational rehabilitation for employees with disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-study 1</td>
<td>Sub-study 2</td>
<td>Sub-study 3</td>
</tr>
<tr>
<td>(Article I)</td>
<td>(Article II)</td>
<td>(Article III)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Article IV)</td>
</tr>
<tr>
<td>Main focus</td>
<td>Re-employment outcomes of long-term unemployed people with disabilities.</td>
<td>Factors influencing clients’ decision-making during rehabilitation process.</td>
</tr>
<tr>
<td></td>
<td>Measures required and used during rehabilitation process.</td>
<td>Factors promoting rehabilitation and re-employment process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Long-term unemployed people (N = 140) and their matched controls (N = 140).</td>
<td>Eight long-term unemployed individuals.</td>
</tr>
<tr>
<td>participants/ informants of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>case studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Quantitative, quasi-experimental with matched control group.</td>
<td>Qualitative comparative content analysis.</td>
</tr>
<tr>
<td>Data collection</td>
<td>Questionnaires, register data, interviews of project staff, project documents.</td>
<td>In-depth interviews, questionnaires, register data.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Focus, study-design, research participants, matched controls and informants of the cases in Sub-studies I–IV.
4.2 Participants, informants and data collection

Participants, informants and data collection of Sub-studies I and II

Sub-study I involved all the participants (N = 140) and their matched controls (N = 140) (Table 2). The background profile of the participants’ and matched control groups in Sub-study I is summarised in Table 3 (Juvonen-Posti et al. 2002).

Table 3. Background profile of participant and matched control groups. From Juvonen-Posti et al. (2002) Table 3.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participant group</th>
<th>Matched control group</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td>mean = 44</td>
<td>mean = 46</td>
<td>0.1021</td>
</tr>
<tr>
<td></td>
<td>min–max = 32–54</td>
<td>min–max = 36–55</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>55 male</td>
<td>55 male</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>33 female</td>
<td>33 female</td>
<td></td>
</tr>
<tr>
<td>Length of work history (in years)</td>
<td>mean = 18</td>
<td>mean = 20</td>
<td>0.1563</td>
</tr>
<tr>
<td></td>
<td>min–max = 0.5–35</td>
<td>min–max = 1–40</td>
<td></td>
</tr>
<tr>
<td>Uninterrupted unemployment (months)</td>
<td>mean = 39</td>
<td>mean = 50</td>
<td>0.0006</td>
</tr>
<tr>
<td></td>
<td>min–max = 9–132</td>
<td>min–max = 5–120</td>
<td></td>
</tr>
<tr>
<td>Mean frequency of diagnoses</td>
<td>5.3</td>
<td>4.4</td>
<td>0.2721</td>
</tr>
<tr>
<td>Self-estimation of health (mean, VAS)</td>
<td>5.5</td>
<td>2.8</td>
<td>0.0001</td>
</tr>
<tr>
<td>Self-estimation of work ability (mean, VAS)</td>
<td>5.9</td>
<td>5.8</td>
<td>0.9285</td>
</tr>
<tr>
<td>Distress (GHQ-12 mean)</td>
<td>4.26</td>
<td>3.77</td>
<td>0.4682</td>
</tr>
<tr>
<td>Perceived competence (WSPS mean)</td>
<td>33.7</td>
<td>33.4</td>
<td>0.7920</td>
</tr>
<tr>
<td>Sense of coherence (ASOC-13 mean)</td>
<td>45.34</td>
<td>45.52</td>
<td>0.9276</td>
</tr>
</tbody>
</table>

VAS = Visual analogues scale; GHQ-12 = 12-item version of the General Health Questionnaire; WSPS = Wallston’s Self Performance Survey; ASOC-13 = 13-item version of Antonockys’s SOC

We selected the matched controls from among unemployed people in the same geographical area, using the register of the regional employment office. The following criteria were used in the selection: age, gender, long-term unemployment, occupational status, and possible disabilities or known special needs regarding employment. We were able to control the matching of the 88 pairs who answered the questionnaires by 36 variables. The rehabilitation participants and matched controls did not differ statistically significantly from each other in terms of age, gender, work history, work ability after VAS (Visual analogue scale) and psychosocial distress, but duration of unemployment was longer and health after VAS was weaker in the matched control group (Table 3).
Of all the participants (N = 140) in Sub-study II (Juvonen-Posti et al. 2004), eight (n = 8) rehabilitation clients participated voluntarily in semi-structured interviews. At the beginning of the project, we informed all clients of the possibility to participate. Four of the interviewees had entered the project among the first 30 clients and the other four interviewees were among the next 30 clients.

In Sub-studies I and II, data were gathered from all the participants via three structured questionnaires (QI, QII, QIII; see Table 4), which were conducted at the beginning of the rehabilitation (QI), at six-month intermediate follow-up (QII) and at the end of the rehabilitation (QIII). In addition, the project staff collected structured data on the tailored activities and their length, and labour market status at the end of the project. We used the official project documents to describe the activities, context and project process, and these were expanded by one group and individual theme interview of the staff, on which notes were taken (Patton 1990, Kruger & Casey 2000, Bloore et al. 2001). We elicited the changes in the labour market situation at the end via the interview and 6, 12, and 24 months after rehabilitation from the register of the Ministry of Labour. Data from the matched controls were gathered via two postal questionnaires (QIMC, QIIIMC; see Table 4). The data on their participation in the local employment office measures and their labour market situation were also gathered from the register of the Ministry of Labour.

The questionnaires included three measures of psychosocial quality of life. Psychological distress was measured using the General Health Questionnaire-12 (GHQ-12; see Goldberg, 1972, Härkäpää 1992, Järvikoski et al. 1999), perceived competence by the Finnish eight-item version of Wallston’s Self-performance Survey (WSPS; see Smith et al. 1991, Wallston 1992, Härkäpää 1995) and sense of coherence by Antonovsky’s SOC (ASOC-13; see Antonovsky 1987, 1993, Järvikoski et al. 1999, Feldt 2000) (Table 7).

The participants’ response rate (see Table 4) was good, and that of the matched controls was satisfactory. The response rate of the questionnaires on the psychosocial quality of life was also good, although it decreased from an average of 89% to 82%, and only 73% of the respondents underwent the matched-pair tests. The missing data were marginal in the participants’ responses, but increased as the follow-up proceeded. Although the matched controls’ response activity was satisfactory on the whole, their responses included a great deal of missing data, and because of this we were not able to analyse the changes in their psychosocial quality of life, for example.

Sub-study II, also gathered data from eight in-depth interviews of the participants before they started their rehabilitation. The themes of the semi-
structured interview were life situation and life course, life resources, selection for the project, and expectations of the project. We recorded and transcribed the interviews verbatim. Table 4 summarises the data and the data collection methods that were used in Sub-studies I and II.

Table 4. Summary of data and data collection methods used in Sub-study I and II.

<table>
<thead>
<tr>
<th>Data collection method</th>
<th>Participants (N = 140)</th>
<th>Matched controls (N = 140)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/N</td>
<td>Data</td>
</tr>
<tr>
<td>Questionnaire I (QI) at beginning of project</td>
<td>140/140 (100%)</td>
<td>Background data, perceived health and work ability, GHQ12, WSPS, ASOC-13</td>
</tr>
<tr>
<td>In-depth interview</td>
<td>8/8</td>
<td>Littered interviews</td>
</tr>
<tr>
<td>Questionnaire II (QII) six months after beginning</td>
<td>121/140 (86%)</td>
<td>GHQ12, WSPS</td>
</tr>
<tr>
<td>Questionnaire III (QIII) at end of project.*</td>
<td>122/140 (87%)</td>
<td>Labour market situation, GHQ12, WSPS, ASOC-1</td>
</tr>
<tr>
<td>Project documents</td>
<td>140/140 (100%)</td>
<td>Information on participants’ interventions, duration of participation in each intervention, process and context</td>
</tr>
<tr>
<td>Employment office’s customer register</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Register follow-up 6, and 24 months after project from Ministry of Labour</td>
<td>140/140</td>
<td>Job search situation, labour market situation</td>
</tr>
</tbody>
</table>

Range of duration was 2–18 months, on average 10 months.*
Participants, informants and data collection of Sub-studies III and IV

The participants of the study that evaluated the implementation of work-related rehabilitation consisted of 27 employers (N = 27), 233 employees/rehabilitees (N = 233), 27 OHS providers (N = 27), and five rehabilitation service providers (N = 5) (Seppänen-Järvelä et al. 2015a). The informants in Sub-study III were the ten employers (n = 10) of the 27 employees who participated in the rehabilitation project, and their OHS providers (n = 10). These ten employers were selected with the aim of incorporating a wide variety of employer organisations in the study. Half of these represented municipalities and half represented the private sector. All these organisations employed more than 1000 people, and some of them operated in several localities. The HR managers of these employers acted as contact persons for the employees who participated in the vocational rehabilitation. None of them refused to participate in the interviews. Nine of them were female and one was male. Prior to the interviews, the informants received written information about the study. The OHS representatives (n = 105) were from fourteen of the ten OHS providers’ units (n = 10), and were contracted by the employers concerned.

The informants of Sub-study IV were eleven employees/rehabilitees and the stakeholders of their rehabilitation processes. The 11 rehabilitees, who gave their informed consent, were recruited from the 233 employees who attended the work-related rehabilitation intervention (Seppänen-Järvelä et al. 2015a, Juvonen-Posti et al. (manuscript)). The method of selection for the cases was information oriented, for maximum variation (Flyvbjerg 2006). The aim of selection was to incorporate a variety of the employees in terms of age, sex, occupational status, and sector of employer and to select rehabilitees from all the five rehabilitation service providers who delivered this rehabilitation concept. Two rehabilitees declined to participate; in these cases, we invited another rehabilitee of the same gender from the same rehabilitation group to the interview. Seven of the participants were women and seven had white-collar jobs. Most of the participants were over 45 years old.

The next step was to recruit the stakeholders involved in each participant’s rehabilitation process. None refused. The total number of interviewees was eleven supervisors (n = 11), one or two OHS unit representatives (n = 14) and rehabilitation service professionals (n = 20).

The data of Sub-study III were gathered from the 10 workplaces taking part in the project. The thematic interviews of the HR managers focused on their experiences of the work-related rehabilitation implemented in the project and their perceptions of job retention and work disability management. The HR interview
data comprised 80 single-spaced pages of transcribed text. We collected the data from their OH professionals via two questionnaires and five focus group interviews (Seppänen-Järvelä et al. 2015a). From these units, 54 professionals answered the first questionnaire, 49 the second, 10 took part in the focus group interviews (171 single-spaced pages of coded transcribed text) and five in the case study interview (Seppänen-Järvelä et al. 2015a). We also included data from the multiple case study (Seppänen-Järvelä et al. 2015b, Sub-study IV), and data from five cases on the outcomes of this collaboration in terms of the rehabilitees’ processes.

The data of Sub-study IV consisted of the interviews of 11 rehabilitees (about 170 pages) and the stakeholders of their rehabilitation processes (Patton 1990, 1997, Kruger & Casey 2000, Bloor et al. 2001, Ruusuvuori et al. 2010). The rehabilitation professionals were interviewed in six focus group interviews, all the other interviews were individual and conducted via the phone. The HR interview data comprised 80 single-spaced pages of transcribed text, and the total OHS interview data comprised 81 single-spaced pages of transcribed text. The questionnaire answered before the intervention revealed the participants’ expectations of the rehabilitation, and the questionnaire answered after the intervention described their thoughts on the rehabilitation process (Seppänen-Järvelä et al. 2015a). The rehabilitation documents revealed the need for and the goals set for rehabilitation. All the interviews in Sub-studies III and IV were transcribed by a professional transcriptionist.

4.3 Research methodology and data analysis

Mixed methods research and the multiperspective approach

The theoretical foundations of the methodology of these studies lay in the developmental evaluation research of outcomes and processes (Patton 1990, 1997, 2011, Seppänen-Järvelä 1999, Moore et al. 2015), multiple case study (Stake 1995, Merriam 1998, Yin 2003, 2013, Byrne & Ragin 2009, Powell et al. 2013) and realistic evaluation (Pawson & Tilley, 1997, Weiss 1998, Befani et al. 2007), in which the key issue was to determine to whom, in what context and through which mechanism(s) the outcomes were realised. Vocational or work-related rehabilitation interventions are complex. They are made up of various components, which may interact. Moreover, various or new, possibly difficult behaviours (such as co-ordination, collaboration) are required by those delivering or undergoing the intervention. The complexity is also due to the interventions being targeted towards
multiple groups or organisational levels, and multiple processes and outcomes. The implementation of a complex intervention has a permitted degree of flexibility or tailoring (Craig et al. 2008).

All the sub-studies, from I to IV had a mixed methods study design and can be classified into different types of mixed methods research according to the categories of Johnson et al. (2007). The design of Sub-study I could be viewed as a quantitative dominant, in which the study relies on a quantitative postpositivist view of the research process, at the same time recognising the benefit of including qualitative approaches. The design of Sub-studies II and IV can be described as a qualitative dominant, in which one relies on the constructivist-poststructuralist-critical view of the research process (Johnson et al. 2007). The design of Sub-study III on the other hand can be described as equal, in which the starting point is the logic and philosophy of mixed methods research: all the data were gathered together to answer the research questions. Table 5 summarises these types of mixed methods designs.

Sub-studies I–IV can also be projected according to Fetters et al. (2013) in order to determine the levels of integration in the mixed methods research. Mixed methods research involves using and mixing qualitative and quantitative methods in ways that have been defined in advance on the basis of a certain justification (Johnson & Turner 2003, Fetters et al. 2013, Creswell et al. 2011, Teddlie & Tashakkori 2009). According to the research questions and the subject, the chosen methods are placed in the research setting and procedure in different ways and at different times (Fetters et al. 2013). Fetters et al. (2013) classify the levels of integration according to design (seven categories; exploratory and explanatory sequential, convergent, multistage, intervention, case study, and participatory), methods (four categories; connecting, building, merging, and embedding) and interpretation and reporting (three categories; narrative, data transformation and joint display). The aims, study designs and types of mixed methods according to Johnson et al. (2007), and the levels of integration in mixed methods according to Fetters et al. (2013) for Sub-studies I–IV, are summarised in Table 5.
Table 5. Levels of integration in mixed methods of Sub-studies I–IV

<table>
<thead>
<tr>
<th>Types of studies</th>
<th>Sub-study I</th>
<th>Sub-study II</th>
<th>Sub-study III</th>
<th>Sub-study IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed method type</td>
<td>Mixed method</td>
<td>Quantitative dominant</td>
<td>Qualitative dominant</td>
<td>Equal</td>
</tr>
<tr>
<td>Levels of integration according to Fetters et al. (2013)</td>
<td>Design</td>
<td>Explanatory sequential</td>
<td>Explanatory sequential</td>
<td>Case study</td>
</tr>
<tr>
<td>Methods</td>
<td>Connecting</td>
<td>Connecting</td>
<td>Connecting (merging)</td>
<td>Merging</td>
</tr>
<tr>
<td>Interpretation and reporting</td>
<td>Integration through narrative: weaving approach</td>
<td>Integration through narrative: weaving approach</td>
<td>Integration through data transformation (Joint display)</td>
<td>Integration through data transformation, (Joint display)</td>
</tr>
</tbody>
</table>

The integration level of the design in Sub-studies I and II, that is a quasi-experimental setting with a matched control group to study the impacts of the rehabilitation, can be classified as explanatory sequential basic designs: the quantitative and qualitative data were collected first as planned, via the same stages simultaneously, and neither party informed the other of the analyses of the process or outcomes. But for a better understanding of the process of the complex intervention of the integrated rehabilitation concept, we included the collection of qualitative data (analysis of the project documents and personnel interviews) in the last phase. This data collection phase was informed by the earlier collected quantitative data. First, in Sub-study II, we finalised the qualitative analyses based on grounded theory using comparative content analysis (Strauss 1990, Seale 1999). Second, we connected the quantitative data to the qualitative data when answering the next research question, that of whether any predictors of employment could be found. In both Sub-studies I and II, quantitative and qualitative methods were connected, especially in the evaluations of the processes. The integration in the interpretation and reporting was narrative, on a theme-by-theme basis, and published in two different sub-studies (Fetters et al. 2013, Moore et al. 2015).

The integration level of the design in Sub-studies III and IV was a case study, in both cases a multiple case study. The integration level of the method was
connecting in Sub-study III and merging in Sub-study IV, and the integration level
of interpretation and reporting was integration through data transformation in both
studies. I describe the latter in more detail below under Data analysis.

Data analysis

Table 6 summarises the statistical methods used in Sub-studies I and II.

Table 6. Statistical methods used in Sub-studies I and II.

<table>
<thead>
<tr>
<th>Statistical method</th>
<th>Sub- study</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS programme 6.06</td>
<td>I, II</td>
</tr>
<tr>
<td>Results as crude frequencies, proportions, crude rations and means, changes in groups in cross-tabulation</td>
<td>I, II</td>
</tr>
<tr>
<td>Statistical significance of changes calculated by the mean of the Pearson X2 test, and when appropriate, Fisher’s exact test</td>
<td>I, II</td>
</tr>
<tr>
<td>Statistical significance of continuous variables of GHQ-12, WSPS and ASOC-13, and when only two groups were compared, we used the Wilcoxon matched pairs test</td>
<td>I, II</td>
</tr>
<tr>
<td>Statistical significance of changes in the means of the continuous variables of GHQ-12 and WSPS, and when more than two groups were compared, we used the two-way analysis of variance, repeated variance analysis and Welch variance analysis</td>
<td>I, II</td>
</tr>
<tr>
<td>For analysing the changes in the means of continuous variables in the subgroups, we used the Kruskal-Wallis one-way test</td>
<td>II</td>
</tr>
</tbody>
</table>

Sub-study II concentrated on analysing the paths of eight interviewed participants until the end of follow-up, and the changes in the psychosocial quality of life of the subgroups, which took paths to (1) work, (2) training, (3) work try-outs, or (4) further assessment of work (dis)ability. We took the participants’ cases from qualitative and quantitative data, their interviews, and from background and follow-up data.

We used the multiperspective approach in Sub-studies III and IV, and this followed the evaluation research design and methods chosen for the evaluation research of the new concept of work-related rehabilitation (Seppänen-Järvelä et al. 2015a). The case in Sub-study III represented co-operation between workplaces and their OHS; the data consisted of multiple perspectives: HR managers (interviews), OHS professionals (two questionnaires, five focus group interviews) and the rehabilitees’ rehabilitation processes (five case descriptions, see below). During the analysis phase, the data were reduced to 0 (meaning no
data), + (meaning agreed) or – (meaning disagreed) outcomes. We transformed the data from qualitative to semi-quantitative data, and then merged this to joint display. (Fetters et al. 2013).

Sub-study IV concentrated on determining the mechanisms and pathways that promoted job retention among the rehabilitees. The data consisted of multiple perspectives, which meant that rehabilitation processes and outcomes were examined from the employee’s, i.e. the rehabilitee’s, point of view (interview, two questionnaires, documents: 80–120 pages for each rehabilitee) as well as from the perspectives of their supervisors (interview), OHS professionals (one to two interviewed professionals per rehabilitee) and rehabilitation service providers (focus group interviews). The within-case content analysis was driven by the research questions, and each case description was structured into six themes: 1) education and occupational background, 2) need for rehabilitation, 3) rehabilitation process, 4) work-relatedness of rehabilitation process, 5) attainment of rehabilitation goals, and 6) mechanisms that promoted or hindered rehabilitation. The content analysis of the interview data was carried out according to the question-originated method, based on the systematic multiperspective study design, which helped merge or embed the data. Hence the data were made into case descriptions of the rehabilitee’s rehabilitation processes. The qualitative data were transformed into qualitative data during this process. For the across-case analysis we applied the QCA (Ragin 1987, 1994, Berg-Schlosser et al. 2009, Schneider & Wagemann 2012, Befani 2013) in order to distinguish the promoting or hindering factors, and mechanisms of the rehabilitation process. In this phase, the data were transformed from qualitative to quantitative. The multidisciplinary research team used multiple data jointly during the different steps of analysis (see O’Cathain et al. 2010).

The analytical process in Sub-study IV was based on case-by-case analysis and multiperspective descriptions of the cases, and we looked at each case in its own context (Ayres et al. 2003, Craig et al. 2008, Moore et al. 2015). The qualitative features of the cases were structured (Stake 1995) so that the features of the phenomenon could be detected and identified at the exact level (see Ayres et al. 2003). QCA was added to the across-case phase analysis (Rihoux & Ragin 2009, Cress & Snow 2000, Schatz & Welle 2016). An important element in this analysis was identifying the ‘sufficient’ and ‘necessary’ conditions that occur in conjunction with an outcome (Schneider & Wagemann 2012). Conditions interact and combine to produce an effect. This understanding is consistent with complexity and the realistic view of the realistic evaluation theory (Pawson & Tilley 1997).
The complete multiperspective dataset of each case was available in the case descriptions, which provided the in-depth qualitative knowledge of each case required by QCA. The research team had further analysed the changes that took place during each rehabilitation process and the job retention outcomes of the eleven employees. This was summarised as a table. At this stage, we added QCA to find the mechanisms (Schatz & Welle, 2016). The conditions, and the types of conditions (one background, eight processes and two outcomes), were derived from the theoretical background of the research and from the research questions. These were (1) an increased risk of job loss due to work disability, (2) rehabilitation enabled the rehabilitee to exercise active personal agency, (3) the process was conducted at the right time in terms of the rehabilitee’s readiness for rehabilitation, (4) all stakeholders had a common and shared view of the goals of rehabilitation, (5) the supervisor was ready to make adjustments to the employee’s job, (6) OHS actively supported the rehabilitee in achieving the goals of rehabilitation, (7) the workplace representatives collaborated with OHS to promote rehabilitation, (8) peer support played a vital role in achieving the goals, (9) the rehabilitation service was adjusted to the needs of the rehabilitee, (10) the process supported the rehabilitee in reaching work-related and vocational goals, and (11) the process promoted the functional capacity and work ability of the rehabilitee. The realisation or non-realisation of the aforementioned two outcome conditions or variables, of which the causes or the causal link between other variables, were looked for. Given that the evaluation targeted a work-related rehabilitation model, the ability of the model to promote job retention among rehabilitees was chosen as the main outcome variable.

After choosing the cases and creating the conditions, the team of researchers scored the conditions and outcome achievements of all cases according to the crisp set QCA, 0 meaning that the condition was not fulfilled or was absent, 1 meaning that the condition was fulfilled or was present, and they transformed the data from qualitative to quantitative. The scores were adopted in two phases to the truth table values of each case in every condition: first each researcher did their own scoring, after which the scores were negotiated in the multidisciplinary team, especially those on which the researchers did not agree. The team worked (see O’Cathain et al. 2010) and continued analysing, and reviewed the multiple data again. When the data showed evidence of both scores, the third score of, 0.5, was chosen. The cases were compared according to the scores in the truth table, based on both data and theory, that is, according to abductive and retroductive reasoning (Meyer & Lunnay 2013).
5 Results

5.1 Research question 1 results: Impacts on working career and other factors

Research question 1 is answered by Sub-studies I and II (Articles I and II).

Work-related rehabilitation’s impacts on working career

Forty eight percent of participants obtained a job at the end of their rehabilitation process, on average 10 months after beginning the project, and 14% of them were still working at the time of the two-year follow-up (Table 7). Table 7 summarises the participants’ labour market changes during the project and the follow-up.

Participation in work gradually decreased during the follow-up period. At 24-month follow up, 83 people (59%) were unemployed, 22 (16%) were on sick leave or retired, 20 (14%) were at work, 11 (8%) were in training, and 4 (8%) fell into the other/unknown category. The workplace seemed to be subsidised for 6–12 months, because there was a significant return to unemployment after six months (p = 0.0150) and a very significant change after 12 months (p = 0.0000).

The participants took part in project activities for on average 10 months, whereas the matched controls received normal service from the local employment office. The follow-up periods of the matched pairs were of the same length as the participants’ project, and varied from 2 to 18 months. Table 8 summarises the project participants’ and matched controls’ labour market situation at the end of the project.
Table 7. Changes in participants’ labour market situation from the end of the project to 24 months after the project, and significance of these changes. Edited from Juvonen-Posti et al. 2002 Table 7 (Article I).

<table>
<thead>
<tr>
<th>Labour market status</th>
<th>A.</th>
<th>B.</th>
<th>C.</th>
<th>D.</th>
<th>Significance of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At end of project</td>
<td>Follow-up at 6 months</td>
<td>Follow-up at 12 months</td>
<td>Follow-up at 24 months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency/Column %</td>
<td>Frequency/Column %</td>
<td>Frequency/Column %</td>
<td>Frequency/Column %</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>67/48</td>
<td>50/36</td>
<td>44/31</td>
<td>20/14</td>
<td>0.0394 0.4477 0.0006 0.0050 0.0000</td>
</tr>
<tr>
<td>In training</td>
<td>21/15</td>
<td>21/15</td>
<td>15/11</td>
<td>11/8</td>
<td>1.0000 0.2841 0.4191 0.2841 0.0603</td>
</tr>
<tr>
<td>On sick leave/retired</td>
<td>29/21</td>
<td>27/19</td>
<td>24/17</td>
<td>22/16</td>
<td>0.7651 0.6423 0.7470 0.4456 0.2784</td>
</tr>
<tr>
<td>Unemployed</td>
<td>23/16</td>
<td>40/29</td>
<td>52/37</td>
<td>83/59</td>
<td>0.0150 0.1268 0.0000 0.0001 0.0000</td>
</tr>
<tr>
<td>Other/unknown</td>
<td>0/-</td>
<td>5/4</td>
<td>5/4</td>
<td>4/3</td>
<td>*0.4982 *0.4472 *1.0000 *0.0603 *0.1223</td>
</tr>
<tr>
<td>Total</td>
<td>140/100</td>
<td>140/100</td>
<td>140/100</td>
<td>140/100</td>
<td></td>
</tr>
</tbody>
</table>

Statistical significance was calculated by means of Pearson’s X2-test or, when market with *, Fisher’s Exact test (two-tailed).
Table 8. Labour market situation of participants and matched control group at end of project. Edited from Juvonen-Posti et al. 2002, Table 8 (Article I).

<table>
<thead>
<tr>
<th>Labour market status</th>
<th>Participants Frequency</th>
<th>Participants Column %</th>
<th>Matched control participants Frequency</th>
<th>Matched control Column %</th>
<th>P/p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>67</td>
<td>48</td>
<td>12</td>
<td>9</td>
<td>0.0000</td>
</tr>
<tr>
<td>In training</td>
<td>21</td>
<td>15</td>
<td>4</td>
<td>3</td>
<td>0.0004</td>
</tr>
<tr>
<td>On sick leave/ retired</td>
<td>29</td>
<td>21</td>
<td>3</td>
<td>2</td>
<td>0.0000</td>
</tr>
<tr>
<td>Unemployed</td>
<td>23</td>
<td>16</td>
<td>120</td>
<td>86</td>
<td>0.0000</td>
</tr>
<tr>
<td>Other/unknown</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>*1.0000</td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>100</td>
<td>140</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Statistical significance was calculated by the means of Pearson’s X2- test or, when marked with *, Fisher’s Exact test (two-tailed).

At the end of the project, a significantly higher rate of the project participants were at work than the matched control participants who were still unemployed (48 % vs 9 %, p = 0.000). Of the project participants, 11 were employed throughout the follow-up period and 10 were in training after one year, two of whom obtained a job after training. Of the participants who were on sick leave at the end of their intervention (n = 29), 72% (n = 24) and 59% (n = 22) were on sick leave or retired after one year and after two years, respectively. Of the participants who were unemployed at the end of the intervention, 61% were unemployed throughout the follow-up period. In Sub-study II (Article II) the participants were grouped into four subgroups according to the main path they took during the project: 45% took paths to employment, 37.1% took paths to training, 14.3% took paths to work trials, and 3.6% took paths to work(dis)ability assessment.

According to Sub-study II, crossing the job threshold was often temporary. Of the eight interviewed participants, all but one were employed or in training at 12-month follow up, but at 24-month follow-up, four were unemployed, two employed, one in training, and one was on sick leave or retired.

The impacts on the working careers of the participants in Sub-study II showed that their labour market situation underwent many unpredictable changes. Most of these sporadic changes happened to those participants whose paths resulted in training. One set of participants in this subgroup continued in training for one year, one participant was on sick leave until the end of the follow-up period, and 10 participants were unemployed at the end of the project as well as throughout the two-year follow-up period. The long period of unemployment ended for four, of the interviewed participants, whereas the 6–12-month break in unemployment
was only temporary for the other four. Four of the participants fulfilled the main expectation of the all interviewed participants, which was to have a clearer life situation. Although the participants estimated their employment and training opportunities realistically at the beginning, no estimates of their situation in the labour market could be made on the basis of the path analysis.

Other impacts of work-related rehabilitation

Sub-study I (Article I) showed that in addition to the effects on the participants’ working careers, their distress decreased. The participants’ distress as measured by the GHQ-12 decreased statistically significantly (p < 0.001) during the first six months. Though it increased later, the level of distress remained statistically significantly (p < 0.002) lower at the end of the project than at the beginning. The perceived competence, as measured by the WSPS, increased but did not reach statistical significance (p < 0.062) at the end of the project. The change in the sense of coherence, as measured by the ASOC-13, was not statistically significant (p < 0.442).

Sub-study II (Article II) showed that the changes indicated better psychosocial quality of life among those who obtained work during the project. This became evident when compared with the means values of the whole group and each of the two other subgroups, the members of which had taken paths to training and paths to work trials. The difference was particularly clear in perceived competence, for which the trend for those who took paths to work was increasing, but in the other two subgroups, decreasing. According to the means of the GHQ-12, WSPS, and the ASOC-13, the participants whose paths resulted in work or work trials benefited more from the project than the participants whose paths resulted in training. The participants whose paths resulted in training showed higher and slightly increased levels of distress, and their perceived competence was poorer than the participants’ mean (Juvonen-Posti et al. 2004 Table 5, Fig. 3, Fig. 4).
5.2 Research question 2 results: Processes or mechanisms that promoted working career and other outcomes

Research question 2 is answered by Sub-studies III and IV (Articles III and IV).

Working career outcomes, the processes and mechanisms through which results were achieved

The QCA of these 11 rehabilitees enabled us to discover mechanisms and pathways that consisted of different facilitators of or obstacles to rehabilitation. Based on these, the processes were divided into three main groups. The five rehabilitees in Group 1 were at the beginning of the risk of work disability process. They strengthened their agency through partnership with multiple actors. One rehabilitee, of her own choice, collaborated with only the rehabilitation service provider when going through her working career change options and obtained confidential support from this source in making decisions regarding her future career path. The rehabilitation of the four rehabilitees in Group 2 focused on personal goals, aiming to develop their work ability. In one case, the process strongly focused on achieving changes at the workplace on the whole, and thus at least partly neglecting the required individual changes. The work-related rehabilitation of the two rehabilitees in Group 3 did not promote job retention. Their expectations regarding rehabilitation were only associated with improving their own general health, and did not concern work-related issues. Moreover, the supervisors failed to support these rehabilitees. OHS professionals collaborated with one rehabilitee, but efforts to collaborate with other stakeholders, such as the supervisor or other representatives at the workplace, were not successful.

Sub-study IV (Article IV) showed how different factors of the discovered mechanism either promoted or hindered the impacts on the participants’ working careers and the other impacts, in each of the eleven cases’ processes. In nine cases, the rehabilitation promoted job retention whereas in two cases it did not. Figure 1 illustrates and summarises the impacts of the new work-related concept of rehabilitation on working careers on working careers.
Sub-study IV discovered interwoven, dynamic mechanisms in the process. The outcomes and impacts of rehabilitation were due to the interaction between facilitators of or obstacles to the rehabilitation process, the intervention, and other components and subsystems of the complex system. The rehabilitees’ process was shaped by their expectations of the rehabilitation service, and their needs and goals for rehabilitation through their own agency. The rehabilitation service process itself, the identified changes and the outcomes, were promoted or hindered by the actions taken by all the stakeholders at the workplace, especially the employee’s supervisor, OHS, the rehabilitation service provider, and the rehabilitee’s life situation factors.

The work-related rehabilitation programme promoted job retention, if, 1.) the process was conducted at the right time in terms of the rehabilitee’s readiness for a work-related rehabilitation programme, 2.) the rehabilitee exercised active personal agency, and 3.) the rehabilitee’s supervisor had the capacity and readiness to make workplace adjustments. If the rehabilitee was at risk of permanent disability, OHS had to play an active role and a collaborative relationship between all stakeholders was needed. Sometimes, if a rehabilitee’s strong personal agency was supported by the rehabilitation service provider, a good result emerged even without shared agency or collaboration with other stakeholders. If the process focused mainly
on making changes at the workplace on the whole, active personal agency was more difficult to achieve, which in turn might have had a negative effect on the individual-level results. Peer support from other rehabilitees and co-workers was important in most cases. Job retention also increased if the rehabilitee’s supervisor had the capacity and readiness to make workplace adjustments. From the perspective of the impacts of rehabilitation, the critical mechanism was that the supervisor was committed and followed a management style that supported work ability. On the other hand, if the target of rehabilitation was to change one’s job, the supervisor’s role could be very small, and diverse co-operation may have been dismissed without the rehabilitation suffering for this. In this kind of situation, the rehabilitation required active personal agency on the part of the rehabilitee, and support from the rehabilitation service provider.

The rehabilitation could not support the rehabilitee’s job retention if the rehabilitee had no active personal agency, if the rehabilitee’s readiness for the new model of work-related rehabilitation was poor, if the supervisor was not ready to develop work, if diverse co-operation between the stakeholders had not begun, or if the stakeholders had no common view regarding the goals and means of rehabilitation.

5.3 **Research question 3 results: Forms of co-operation and rehabilitees’ opportunities to choose from different options and act**

Research question 3 is answered by Sub-studies I, II, III and IV (Articles I, II, III and IV). Sub-studies I and II answer Research question 3 from the perspective of the work-related rehabilitation process of long-term unemployed people with disabilities, and Sub-studies III and IV answer it from the perspective of the work-related rehabilitation process of employed people with disabilities.

**Forms of Co-operation**

*Sub-study I* (Article I) showed the forms of co-operation during the participant’s rehabilitation in both individual client work and between agencies. The main means of the client work were case management, the multidisciplinary assessment of each participant’s work ability, group training, work trials, and subsidised placements. The multidisciplinary assessment of work ability visits, a routine outpatient service at the rehabilitation unit of the University Hospital, took on average 4–6 weeks.
The one exception to the routine service was that the vocational rehabilitation counsellor from the project took part in their client’s summary meeting. The aim of this was to avoid information gaps in the transfer of the medical rehabilitation expert’s conclusions to the vocational rehabilitation process.

On the basis of the recommendations from the work ability assessments, the vocational rehabilitation counsellor assigned the participants to different kinds of training, work trials and subsidised jobs. First, 108 of the 140 participants took part in the six-week training and rehabilitation course organised by the project according to the group support method. This course can also be considered as a peer group support. After the course, the counsellor looked for work trial places, mainly in public organisations. According to the staff, these plans were made co-operatively with the clients. The mean duration of the first work trials was 64 days, and the second 49 days. Work trials could continue as subsidised jobs. The vocational training courses offered by the local employment office usually lasted 15 weeks.

Table 9 summarises the outcome of the tailored rehabilitation services according to the main paths the participants took during their project. The table describes in detail how the same outcome, for example training, was achieved through tailor-made services based on the rehabilitee’s needs. This was realised as different paths to training. The main means of co-operation with agencies was that between the rehabilitation unit at the hospital, the local employment office and public-sector organisations, employers, and organisers of the work trials. The vocational rehabilitation counsellors searched for subsidised employment or work trials, mainly by phone, and in public organisations.
Table 9. Outcome of tailoring different services during the project. Edited from Juvonen-Posti et al. 2002 Table 4 (Article I).

<table>
<thead>
<tr>
<th>n</th>
<th>%</th>
<th>Work ability assessment</th>
<th>Group training</th>
<th>First work trial</th>
<th>First vocational training</th>
<th>First employment trial</th>
<th>Second work trial</th>
<th>Second vocational training</th>
<th>Second employment trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Alternative paths to work with employment as endpoints (n = 63, 45%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>15.7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>7.9</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>7.9</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>4.3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>3.6</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>2.1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>2.1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>2.1</td>
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The case management in this project was understood to be individual re-employment-oriented guidance, counselling and co-operation within the service system. The case manager, i.e. the vocational rehabilitation counsellor gathered the information on the participant’s work disability and on training, work and work trial opportunities. The case manager was in co-operation with agencies and workplaces and combined the negotiated outcomes with the client’s vocational rehabilitation processes in accordance with their rehabilitation goals and plan.

*Sub-study II* (Article II) showed that the forms of co-operation were facilitated by the case managers taking on an active role. The participants expected the case managers to carry out the co-ordination. It seemed hard for these long-term unemployed people, on their own at least, to find solutions to their life situation. The participants had gained considerable experience from different training, rehabilitation and attempts at employment, so that at the beginning of the project they did not want to seem too eager or to risk failure. At the time they entered the project, they did not actively define their new possibilities from their own standpoints and left the decision to the professionals. They were unable to form a clear picture of their possibilities; for example, they had not yet decided whether to return to work. Interpreting their special needs for returning to work was also difficult.

*Sub-study III* (Article III) showed that the new concept of work-related rehabilitation was implemented through a variety of forms of co-operation at workplaces and in OHS. The level of recognition of the different needs for support and rehabilitation, and the methods of co-operation varied greatly. Figure 2 illustrates the model of the new work-related rehabilitation concept.
The new concept of work-related rehabilitation included co-operation and collaboration in several phases. The rehabilitation service provider was responsible for co-ordinating the group and the individual rehabilitation service process from the planning phase onwards. The model was based on the assumption that the OHS provider co-ordinated the employee’s/rehabilitee’s process and progress. The intervention started with a collaborative meeting between all the stakeholders. The main aim of the meeting was to set up the main goal and workplace’s target group for rehabilitation. These were, for example, work community-based early intervention
of distress, supporting the RTW and deployment of employees with disabilities, or mixed, according to the needs of the workplace. The groups of rehabilitation clients were mainly selected from one employer.

The planning phase continued so that each employee interested in attending the rehabilitation process went through a semi-structured discussion with their supervisor to determine their work-related needs for rehabilitation. Next, employees attended an OHS appointment, at which the need and goals for the vocational rehabilitation were addressed from a work disability prevention point of view. This planning phase was concluded by the decision made by the rehabilitation organiser making the decision based on the data documented by the OHS physician.

The planning phase was followed by the rehabilitation service provider’s multiprofessional team compiling an individual rehabilitation plan and objectives for each rehabilitee. This phase started with an individual assessment of each client: the rehabilitee, together with their employer, pinpointed the work-related problems in a discussion. The rehabilitees participated in planning the amount and content of these sessions in their individual rehabilitation paths, together with the employer and the rehabilitation service provider and occasionally also with OHS.

The rehabilitation programme was modified for each group of clients. During the group rehabilitation periods, one co-operative meeting day for all the stakeholders was arranged. The meetings could be held at the rehabilitation institution or at some other location. At least one of the individual sessions was arranged at work or workplace. The summing up phase of the intervention consisted of a meeting which brought together the outcomes of the group and individual parts of the rehabilitation and follow-up procedures were planned, for example for work, the workplace, OHS or the rehabilitee her/himself, together with the rehabilitee and their stakeholders.

The rehabilitation intervention contained procedures that aimed to improve the rehabilitee’s work ability and functional capacity, and the rehabilitation service was also intertwined with the rehabilitee’s work, work surroundings and life situation. The rehabilitation was aimed to support both the setting and achieving of realistic goals. The rehabilitation intervention was implemented by a systematic interprofessional case by case collaboration between organisations. Table 10 summarises the realised collaboration between OHS and workplace actors in the new work-related multidisciplinary rehabilitation concept per rehabilitee group.
Depending on which actor led the joint work during the implementation of the new concept of work related rehabilitation, the collaboration between workplaces and their OHS could be classified into three types: jointly driven, employer-driven and OHS-driven. The co-operation between HR and OHS was realised in four rehabilitee groups processes (1, 2, 6, 7; see Table 10). Employer-driven collaboration was led by HR in particular, and was realised in three groups (3, 4, 10; see Table 10). The OHS provider led three of the co-operation processes during the rehabilitation (5, 8, 9; see Table 10).

Sub-study III data showed that the ten HR professionals interviewed were aware of the personnel situation in terms of work disability. The participating organisations had different information and management systems to keep track of their personnel. In order to define the target group and select the participants for the rehabilitation course, the interviewed HR professionals either worked actively in close co-operation with OHS service providers or co-operated dynamically within the work organisation, especially with middle managers. Although HR was active in multiagency co-operation, the supervisors were not necessarily ready for the co-operation needed at the workplace or with the employees. From the HR professionals’ perspective, this kind of rehabilitation was ‘one tool in the toolbox’ for managing personnel’s work ability. Usually, the HR professionals took part in the first planning phases of rehabilitation, but not in the other phases of
collaboration after rehabilitation had started. Collaboration with the workplace occurred mostly through the supervisors. The model included a co-operative day (see Fig. 2.), during which HR professionals could also find a meaningful role, if they were invited. Some of the HR professionals expected feedback on the whole rehabilitee group from the rehabilitation service providers in order to better connect the rehabilitation intervention to the workplace’s support for job retention or its work disability management procedures.

In order to prevent work disability, OHS should also monitor employees’ work ability, job retention and needs for rehabilitation; collaborate with workplaces on work disability prevention and integration issues; and when needed, co-ordinate and collaborate in the rehabilitation action network, case by case. According to the OH professionals, the most important functions of OHS were to recognise employees’ needs for rehabilitation and to select rehabilitees. The OHS professionals participated actively in the collaboration during the rehabilitation process, the most common way of collaboration being the three to four meetings of the new model (see Fig. 2.). The co-operation between the OHS professionals and service providers required by the concept varied a great deal. The differences between the intensity of the follow-up of the employees’ rehabilitation processes and the collaboration between workplaces and rehabilitation professionals were noteworthy.

The OHS nurse was most commonly responsible for co-operation in the rehabilitation process. Only one team divided the responsibility among all the members of the multidisciplinary OHS team. According to the interviewed OH professionals, the most successful work-related outcomes were achieved when supervisors were involved. The OH professionals also wanted to co-operate more with all the workplace’s stakeholders, including occupational safety professionals, but especially with supervisors and managers, with regard to the work- and workplace-related issues that the rehabilitation process raised, and of the practical solutions with which the impacts of rehabilitation could be maintained. The whole range of roles and tasks of the work disability case management of Finnish occupational health were not fully recognised or implemented in OHS during the developmental project, although the complex collaboration had many new impacts on both employees and OH processes.

All the stakeholders worried about the continuity and integration of the impacts of the rehabilitation process, but in their own stakeholder role and from their own perspective. Sub-study III showed that in the multiagency collaboration of the new work-related multidisciplinary rehabilitation, the clarity of roles and tasks promoted the rehabilitation processes regardless of whether the workplace or
OHS was responsible for leading the joint work (see Fig. 2.). However, the quality of collaboration seemed to be fundamentally important. In addition, the individual customer-level co-operation between OHS and the rehabilitation service providers’ professionals still seemed to work, regardless of which stakeholder entity was active in organising the co-operation.

In Sub-study IV (Article IV), the collaboration arenas enabled all stakeholders to be part of the co-planning of common goals and shared decision-making, and to show their commitment, responsibility and common provision of support. In practice, the different stakeholders recognised the new opportunities for co-operation, and used them in different ways. Some stakeholders used the network actively. The elements of effective co-operation were supervisor activity, a cooperative approach, good knowledge of the rehabilitee’s work, and deliberative interaction. Some of the rehabilitation service providers, OH professionals and supervisors did not know how to take advantage of the co-operation opportunities offered by the new rehabilitation concept. Guaranteed genuine co-operation was not necessarily the common goal of all the stakeholders, as long as every stakeholder maintained their own traditional role.

The prerequisite of rehabilitation was usually that all stakeholders’ co-operation was open and diverse, and that the different stakeholders had an almost common and shared view of the goals and means of rehabilitation. However, this common view was not the absolute prerequisite for rehabilitation. Personnel changes in OHS and among the rehabilitation service providers and supervisors complicated co-operation. Usually, but not in all cases, peer support had a significant effect on the rehabilitation process, helping it progress in a positive direction.

Rehabilitees’ opportunities to choose from different options and act

Sub-studies I and II (Articles I and II) showed that in this expert-led process, coordinated by the case manager, the participants had several opportunities to make choices. The case manager, the vocational rehabilitation counsellor, interviewed all those who were interested in participating in the project. The interviews took place at the local employment office and later at the project’s premises. Job-seekers could decide whether or not to participate in the project and were guaranteed no negative consequences to their income or otherwise. The staff reported that very few chose not to participate. One of the promoting factors we found was the freedom of choice regarding whether to take part in the project and the promise of no negative consequences, especially for their unemployment allowance.
In *Sub-study II* (Article II), the participants did not actively define their new possibilities from their own standpoints in any detail, but made it clear that they had high expectations of the project. At the beginning of the project, the participants had not yet decided whether to return to work, but had left this decision to the professional(s) working on the project. Although the participants were free to participate in the project, *Sub-study II* showed that a third obstacle was how, at least at the beginning, the participants’ own agency in their working career goals was weak. The personal meaning attached to their disability and their special needs also came out weakly. They described in detail the obstacles their disabilities caused at work and their need for practical adjustments at work. At the time the participants entered the project, their life situations were marked by uncertainty, they were unable to form a clear picture of their possibilities, and they were hoping that the project would define their opportunities and help them take action to realise these opportunities. The relevancy of RTW or training influenced their high hopes for the project. It comprised their experiences of employment opportunities, the duration of unemployment and how they experienced their work ability or disability. However, during the project, the eight interviewed participants took active paths towards work and training, as did most of the project participants.

*Sub-study I* (Article I) showed how the participants’ project process proceeded to the expert-led assessment phase. The work ability assessment was organised as a routine out-patient service at the rehabilitation unit of a hospital. In addition to the interview, this was the only other phase in which all participants took part. On the basis of the conclusions and recommendations from the work ability assessments, the vocational rehabilitation counsellor assigned the participants to different kinds of training, work trials and subsidised jobs. According to the job-seekers, the fact that the decisions regarding their vocational rehabilitation and re-employment were made co-operatively, was the second promoting factor. In addition, good collaboration between the unit of rehabilitation and the local employment office promoted the participant-driven tailoring of the rehabilitation process. The latter in particular enabled the vocational rehabilitation counsellor to look for suitable vocational training and work trial opportunities for their clients. An obstacle to rehabilitation was that jobs were only searched for in public organisations, especially municipalities, which could not continue employment after the subsidised period. A second obstacle was that the workplaces were contacted by phone. We have no data on how and to what extent the workplaces were tailored to the needs of the participants.
The third promoting factor was that through case management, the participants were given several options to choose from different opportunities for their own vocational rehabilitation path. This was also shown in the variation of the length of the participants’ projects, which varied individually from 2 to 18 months, the average being 10 months. The options for vocational rehabilitation paths were group training, first and second work trials, first and second vocational training, and first and second employment, the combinations of which are summarised in Table 9. In Sub-study II, we were unable to specify the possible contextual mechanism with promoting factors or obstacles at this level. The variations between the situations of the subgroups might have enabled some predictions about the subgroups’ outcomes. However, we could not make predictions regarding individual participants’ outcomes, because the changes were so sporadic.

Sub-study III described how the rehabilitees’ opportunities to choose and act depended on the different actors’ agency in the workplace, OHS and rehabilitation services, as well as on the rehabilitees’ own agency. For example, the non-commitment of a supervisor, the limited interpretation of the role of OHS during the rehabilitation, or rehabilitation expert-led decision-making in the individual sessions could weaken or prevent rehabilitees’ opportunities to choose and act in different situations during the rehabilitation process.

Sub-study III revealed the promoting and hindering factors of the process, and that the knowledge of the employees’ work ability and their need for rehabilitation varied greatly from one workplace-OHS pair to the other. The obstacles to the process, and the particularly critical phases in the distribution of information seemed to be changes in HR personnel or the reversal of the whole OHS provider. Moreover, personnel changes in OHS and rehabilitation service providers and in supervisors complicated co-operation. In many large workplaces, HR was responsible for the practical process control of work disability management. Although HR was active and willing to co-operate, this did not mean that all managers and supervisors in the same organisation were ready to co-operate in the job and per worker co-operative rehabilitation processes. In addition, although HR was active in work disability management, it may have understood the work-related rehabilitation model to be traditional, exclusively promoting only employees’ health and functional capacity, and because of this, it may have withdrawn from co-operation, leaving the responsibility solely to the OHS provider. On the other hand, the rehabilitee’s own strong agency or the supervisor’s nonalignment could also prevent real co-operation. Sub-study III discovered that the individual customer-level co-operation between OHS and rehabilitation service provider
professionals could be successful, regardless of which stakeholder entity was active in organising the co-operation.

*Sub-study IV* showed that by giving the rehabilitees opportunities to choose and act, the work-related rehabilitation concept supported their job retention. This impact on job retention was achieved when a rehabilitee had active personal agency and the rehabilitation was conducted at the right time in terms of the rehabilitee’s readiness. It was also critical that the rehabilitees’ process was shaped by their expectations of the rehabilitation service, their needs and goals for rehabilitation, and their own agency. The facilitators of or obstacles to the rehabilitation process were interwoven, and formed dynamic mechanisms in each case.
6 Discussion

The purpose of this thesis has been to contribute to the present dialogue on the possibilities of defining work-related rehabilitation tasks in a way that combines different perspectives and interests. Another aim was to discover the facilitators of and obstacles to work-related rehabilitation processes and the mechanisms through which working career outcomes are generated. First I presented an overview of two vocational rehabilitation research projects, and from multiple perspectives, the impacts on working career and psychosocial factors. Next I provided an overview of the processes and mechanisms that promoted the working career and other outcomes of employed people with disabilities. The following overview was of multiactor collaboration and the rehabilitees’ opportunities to choose and act during the work-related rehabilitation processes. I pointed out that through the tailored intervention, unemployed people with disabilities temporarily crossed the job threshold. I revealed that for employed people with disabilities, work-related rehabilitation promoted job retention through a dynamic contextual mechanism, where interwoven factors such as the rehabilitee’s own agency, their life situation factors, and shared agency and multiactor collaboration at the workplace in particular either facilitated or hindered working career outcomes. I showed how in two vocational rehabilitation research projects, the co-ordination of multiactor collaboration and shared agency supported the rehabilitee’s agency, when needed or wanted, although this co-ordination was challenging. I recommend that in order to improve the implementation and effectiveness of work-related rehabilitation, for rehabilitees and all the other stakeholders, we must look for the contextual mechanisms along the description of the processes, obstacles, and facilitating factors. I briefly summarised how, when the research interest is not only the outcome but also in the intervention, this enables us to better understand the outcome data.

6.1 Discussion of the results: Opening the ‘black box’ of work-related rehabilitation by multiperspective data and mixed methods analyses

Impacts on working career and psychosocial factors

In the Pathway-to-Work project, re-employment and work-related rehabilitation for unemployed people with disabilities and, the impacts on working career were measured by the employability (see Tuomala 2012) of unemployed individuals
with disabilities. The findings were as follows: (1) a long period of unemployment ended for 68–44% of participants, (2) the difference between the participation in work of the participants and their matched controls was statistically significant at the end of the project, and (3) the 6–15 months break in unemployment was often temporary. These findings of further, although temporary, impacts of vocational rehabilitation intervention on the working career organised after the ‘train and place- model’ are also supported by the previous literature (Melin & Fugi-Meuer 2003, Jakobsson et al. 2005) and suggest to a new operational paradigm the ‘place and train- model’ (Spelkavik 2012, Härkäpää et al. 2013, Markussen & RØed 2014). Although employment support was based on individual choice, real long-term work opportunities were not created (Spelkavik 2012, Krupa et al. 2015). One obstacle was that jobs were only searched for in public organisations, especially municipalities, which could not continue employment after the subsidised period.

The findings of this research complement earlier research (Melin & Fugi-Meyer 2003) by emphasising that socio- and psychological aspects were more predictive of the employability outcome than work disability. However, the effective components of the interventions on participation outcome, also outside work, need to be examined (Engen et al. 2016)

The need for rehabilitation was defined at the local employment office. The difficulty faced by the labour officials in this task was due to the small amount of services offered to the matched controls, despite their need. Still, this study cannot answer the question of whether job-seekers with disabilities express their needs to the officials. They may not do so for fear of encountering negative economic consequences, for example. Moreover, suitable tailored services, such as the project intervention or the collaboration required between different actors, are lacking. In addition, a discussion on the access criteria for work-related rehabilitation is needed: what weight should be given to the working career and (local) labour market factors, how and by whom should they be assessed, and would these criteria enable the earlier or timely onset of work-related rehabilitation for unemployed people with disabilities?

The unemployed matched controls, who were even more in a need of support than the participants, were offered only a few vocational rehabilitation services to support their re-employment. These results are from the end of the 1990s, but still in the 2010s in Finland, despite our good general understanding of the vocational rehabilitation needs of unemployed people (Pensola et al. 2008, Heponiemi et al. 2008, Blomgren et al. 2011), their access to rehabilitation does not yet correspond to their needs (Pensola et al. 2012, Saikku 2016). This result highlights
the importance of the fact that although unemployment is one of the known social determinants of health (Aromaa et al. 2005, Marmot 2005), vocational rehabilitation has not been used in Finland for this target group to its full extent to reduce inequalities in health. The reverse, i.e. preventing ill-health and improving working conditions and possibilities, especially among the lower socioeconomic classes, would help reduce socioeconomic differences in disability retirement and unemployment (Polvinen et al. 2013, Reeuwijk et al. 2017). The research results of this study highlight how important it would be for the authorities and work-related rehabilitation experts to give more consideration to understanding people’s behaviour, and become more familiar with the social and cultural context of rehabilitees’ everyday lives (see Koskela et al. 2016), especially when working with and implementing service models for long-term unemployed people with disabilities.

In this multiple case study of eleven pathways in the work-related rehabilitation of employed people, rehabilitation promoted job retention in nine cases, whereas in two cases it did not. This indicates that the changes in employability that can be seen as an effect of the intervention process of earlier than traditionally implemented work-related rehabilitation, may be different. The effects we found were changes of varying quality in rehabilitees’ as well as their supervisors’ or colleagues’ attitudes and actions, interaction, work processes, job functions, and job modifications in comparison to the effects of, for example, a decrease in sickness absences. This contradicts earlier research results of a lack of employability evidence in early interventions compared to usual rehabilitation (Suoyrjö et al. 2009, Saltychev 2012, Vargas-Prada et al. 2016). The qualitative methodology used in the study of the effects of vocational rehabilitation interventions described in detail changes at work that supported SAW. Looking for these kinds of changes may be important in the future when evaluating the impacts and effects of early intervention on job retention, when reduction of sickness absences or disability pensions cannot always be seen. The study lacks evidence on the sustainability of these outcomes. However, the evaluation research of the implementation of work-related rehabilitation for employed people with disabilities found (Seppänen-Järvelä et al. 2015a) that positive changes at work and the workplace were especially manifested in those work and workplace factors in which the rehabilitees’ situation was worse than that of the other staff, and among the rehabilitees who felt the need for support in terms of working conditions and their own working careers. The new model of work-related rehabilitation has the capacity to promote staying at work but long term effects are yet to be seen.
The bias of selection and selection criteria of the work-related rehabilitation impacts the working career outcomes of these interventions. Specific matching of vocational rehabilitation to the needs of the individual, and careful selection of individuals for different interventions may increase effectiveness (Buström et al. 2011). The assumption regarding the implementation of this work-related rehabilitation of employed people with disabilities, was that workplaces, together with their OHS provider, were aware of their personnel’s need for rehabilitation. This is the norm in Finland. The rehabilitation was allocated in accordance with this well-known need, but the knowledge of the personnel’s needs for rehabilitation varied greatly from one workplace-OHS pair to another (Seppänen-Järvelä et al. 2015a, Juvonen-Posti et al. 2015). The result that the personnel’s need for rehabilitation at the workplace was inadequate in terms of targeting rehabilitation has also been found in earlier studies (Suoyrjö et al. 2009, Saltychev 2012).

This work-related rehabilitation was targeted at the workplace, and the need for rehabilitation was also defined at the workplace, which is not always the focus of the tasks of supervisors or HR specialists. This brings again access criteria for work-related rehabilitation to the discussion (see Harder & Scott 2005, Fassier et al. 2015): how should work-related factors be weighted, and how and by whom should they be assessed (see Geisen 2015)? Would these criteria enable earlier or timely onset of work-related rehabilitation, because an early enough start has been shown to link closely to a successful rehabilitation process and RTW after rehabilitation (see Gould et al. 2012ab, Fassier et al. 2015)?

Still, the need for rehabilitation that consists of several factors, possibly a long-term need developed over time, was observed in both the interventions studied outside the healthcare sector and the actors: among those who were unemployed in the local employment office, and among those employed at the workplace. The outcomes for work and the working career are generated elsewhere or otherwise than through treatment and medical rehabilitation, which earlier research has also pointed out. In order for medical rehabilitation to achieve good RTW results, the workplace should also be involved in the rehabilitation process, and changes should be made both at work and at the workplace (Kuoppala & Lamminpää 2008). This strongly diverges from the traditional medical model, which regards (acute) illness or operative care treatment and (medical) rehabilitation as a sufficient measure.
Processes and mechanisms that promoted working career and other outcomes

We discovered interwoven, dynamic mechanisms in the work-related rehabilitation process. The outcomes and impacts of rehabilitation were due to the interaction between the facilitators of or obstacles to the rehabilitation process, the intervention, and other components and subsystems of the complex system. The overall results of these two research projects highlight the importance of the discovered contextual mechanism, and the factors through which the outcomes of the work-related rehabilitation were generated. This contextual mechanism is formed of two key interwoven entities. First, the rehabilitees’ process was shaped by their expectations of the rehabilitation service, their needs, and their goals for the rehabilitation through their own agency. Secondly, the rehabilitation service process itself, the identified changes and the outcomes, were promoted or hindered by actions taken by all the stakeholders. The promoting or hindering mechanisms came through the actions taken by the workplace and especially the rehabilitee’s supervisor, the OHS and rehabilitation service providers and the rehabilitees’ life situation factors. Although we found no contextual mechanism of the work-related rehabilitation intervention for unemployed people with disabilities, we did find similar factors that promoted and hindered the outcomes of this work-related rehabilitation.

The results of these two rehabilitation projects complement earlier research findings in that they emphasise that it is essential to recognise and understand the complexity of a social intervention (Finch et al. 2012, Moore et al. 2015, Fletcher et al. 2016) such as work-related rehabilitation. In complex social interventions, the outcomes and impacts are due to the interaction between the intervention and other components and subsystems (e.g. local employment office, workplace, health care) of the complex system (Westhorp 2013, Byrne 2013). These outcomes emerge through dynamic contextual mechanisms (Pawson & Tilley 1997, MacEachen et al. 2006). To better understand the outcomes of social interventions such as work-related rehabilitation in the complex system, it is essential to determine the promoting and hindering factors of the processes. Both the complexity of the implementation of the social intervention and unpredictable changes in individual life situations cause challenges in coping.

Various promoting and hindering factors of work-related rehabilitation processes for both employed and unemployed people with disabilities have previously been discovered. Our results show that these factors are key elements of the contextual mechanisms revealed. When found in earlier studies to be promoting
factors, they have also influenced positive working career outcomes (Wynne & MacAnaney 2004, Kuoppala & Lamminpää 2008, Gould et al. 2012ab). These promoting and hindering factors are, for example, the person’s own active agency, shared agency (Gould et al. 2012ab, Härkäpää et al. 2014), collaboration and communication (Ståhl et al. 2010, Andersson et al. 2011, Liukko & Kuuva 2015), and the role of the workplace (Bond 2004, Franche et al. 2005b, Burns et al. 2007, Waddell et al. 2008, Kuoppala & Lamminpää 2008, Haafkens et al. 2011, Lysaght et al. 2012, Geisen 2015). Next, I will discuss this entity theme by theme.

In order to improve the implementation and effectiveness of work-related rehabilitation for rehabilitees and all the other stakeholders, it is not enough to merely describe processes and discover facilitating and hindering factors. We must also look for the contextual mechanisms. When the research interest is not only the outcome but also the intervention and what is actually happening during the intervention, we can understand the outcome data (Weiss 1998): the routes, processes or mechanisms through which job retention, RTW or re-employment was achieved. It is essential to assess the implementation process to guarantee that the implemented complex social intervention is sustainable before attempting to assess its effectiveness (Fassier et al. 2015).

Multiperspective (Magasi et al. 2009) and mixed methods analyses (Craig et al. 2008, Teddlie & Tashakkori 2009, 2011, Creswell & Plano Clark 2011, Byrne 2013, Fetters et al. 2013) enables research to observe what has happened during the rehabilitation process. This is essential for generating insights into what works, in what context and to whom. When investigating the outcome of social interventions in a complex system, we must analyse both the mechanisms and the effects. This enables us to more carefully open the black box of work-related rehabilitation interventions and their work-related outcomes.

Multi-actor collaboration and the rehabilitees’ opportunities to choose and act during work-related rehabilitation processes

There were opportunities to choose from different options and act during the work-related rehabilitation processes for both unemployed and employed people with disabilities, which the multi-actor collaboration, or actions taken by a single stakeholder, promoted or hindered.

The studied work-related rehabilitation model for employed people enabled the rehabilitee to exercise active personal agency in all cases in which the rehabilitation promoted job retention, and different kinds of collaboration advantages were
fulfilled in these cases. The rehabilitee’s own agency, together with the shared agency of other participating stakeholders, were both parts of the mechanisms through which the outcomes of the work-related rehabilitation emerged in each case. The results of this study highlight the importance of enabling the rehabilitee’s own active agency for the job retention efficacy of this rehabilitation, although this sometimes meant withdrawing from the multifaceted collaboration. These processes need to be handled discreetly if all the stakeholders’ confidence is to be gained.

In addition, the participants of the Pathway-to-Work project who obtained work during the project could exercise active personal agency: the difference was particularly clear in perceived competence: the trend for those who took paths to work increased whereas in the other two subgroups it decreased. The successful support of the rehabilitees’ own agency was also seen as actions; most of the rehabilitees took active paths towards work, training and work trials despite their own evaluations of their work ability being realistic and fairly low.

As shown in earlier research (Buström et al. 2011), multiactor collaboration can improve, for example, working career impacts: holding a co-ordination meeting with different rehabilitation actors about people on long-term sick leave increased the probability of an active rehabilitation measure being initiated five-fold, and doubled the probability that adaptations would be made at the workplace. The findings of this research complement earlier studies in that they highlight that even in an expert-led process co-ordinated by a case manager, the participant’s own, initially even weak, agency can be supported by sharing the decision-making between the rehabilitee and their case manager (Järvikoski et al. 2013, Härkäpää et al. 2014, Salminen et al. 2017). The findings of this research are also in line with earlier research by Gould et al. (2012ab) and Härkäpää et al. (2014), which emphasised that the rehabilitee’s active participation in the planning process, and the support obtained from various stakeholders are essential factors in the rehabilitation process, and increase the probability of a good rehabilitation outcome. Another common finding was that empowerment of the rehabilitee was strongly connected to the rehabilitee’s motivation to follow through their work-related rehabilitation process.

Good collaboration between strategic partners supported the rehabilitee’s own agency and shared agency, and encouraged participant-driven tailoring of the rehabilitation process. This has also been seen in earlier research (Kärrholm et al. 2006, Andersson et al. 2011, Gould et al. 2012ab). In the case of the Pathway-to-Work project, the strategic partners were the unit of rehabilitation and the local
employment office, and in the case of the Work-related Rehabilitation II project, the employer, its OHS provider and the rehabilitation service. Stakeholders’ interests have a high impact on the prerequisites for co-operation in RTW, but by referring to organisational goals, stakeholders may engage in non-co-operative behaviour, which threatens to spoil collaboration and to develop distrust in the action network in question (Ståhl et al. 2010). Especially from the collaboration perspective of implementing a work-related rehabilitation intervention, we should consider this a process with a high risk of failure, requiring a strategy adapted in detail to the facilitators and obstacles identified in each context (Fassier et al. 2015), and not only good co-ordination of a single process but also well-managed collaboration processes for each stakeholder needed in the process.

My finding that the need for tailoring also concerns the collaboration needed in the action networks and processes of work-related rehabilitation is also supported by the previous literature (Andersson et al. 2011). Both the studied development and research projects were based on temporary collaborative action networks. The ‘Pathway-to-Work’ project was based on a regional network, and the ‘Work-related rehabilitation II’ project was based on the one hand on a nationwide network, as the organiser was The Social Insurance Institution of Finland, and on the other hand on a local network, as it targeted single organisations (see Lindh 2014). Earlier research (Chamberlain et al. 2009) points out that although the clarity of the roles and tasks of those involved in the collaboration on the work-related rehabilitation process facilitates the rehabilitee’s process, it does not necessarily guarantee a successful rehabilitation process. Thus, contradicting earlier research (Young et al. 2005, Andersson et al. 2011), this study indicates that the common view was not the absolute prerequisite for the rehabilitation. Multiactor collaboration itself was more essential; collaboration on both the individual level and between the agencies and actors. The different paths to better interaction between the actors, especially the workplace actors, may play a crucial role in these complex systems that aim to support work ability and increase job retention outcomes (Costa-Black et al. 2013). According to the results, when designing and implementing work-related rehabilitation concepts, it is also necessary to build arenas for collaboration, so that all the stakeholders needed can collaborate in each phase.

Vocational or work-related rehabilitation is generated in local or regional action networks (Lindh 2014). Coping with these processes poses a challenge to individuals, other agencies and actors, and to the flexibility of the service system. This kind of collaboration requires a highly developed understanding of at least the interaction of the co-ordinators of these processes that involve rehabilitees and a
multiactor network (Fassier et al. 2015). The first model was based on the assumption that the vocational counsellor co-ordinated the unemployed rehabilitee’s process, but this was only done during the intervention. The second model was based on the assumption that the OHS provider co-ordinated the employed rehabilitee’s process and progress, but only a few of the studied OHS service providers or professionals did this systematically (Seppänen-Järvelä et al. 2015a). Both these new concepts included co-ordination, one focused more on the rehabilitee’s process and the other tried to co-ordinate both the rehabilitee group and the individual processes. Both co-ordination models lacked a systematically conducted, long-term case-by-case follow-up. In the field of work-related rehabilitation there is a great deal of discussion on how rehabilitation services should be tailored to the rehabilitee’s need for rehabilitation. Based on our findings, I recommend that the more multistaged the processes are, the better the co-ordination is, although it is uncertain how effective RTW co-ordination is (Vogel et al. 2015). However, alone it is not enough.

These results emphasise that when promoting job retention and preventing work disability through work-related rehabilitation, the focus of the rehabilitation should be on the work and the workplace, which is in line with previous findings (Kuoppala & Lamminpää 2008, Waddell et al. 2008). But when pursuing the effects of job retention and sustainable RTW, focusing on the workplace is not enough, participation must be active (Williams-With et al. 2016). The participation of supervisors in particular is crucial when aiming for sustainable working career solutions (Haafkens et al. 2011, Lysaght et al. 2012), and the required work modifications should be made via the supervisor (Fassier et al. 2015). This study also indicates that the commitment of supervisors was one of the factors that contributed to the success of the rehabilitation. The effects were also visible at the workplace level, and were assessed as more permanent. The employer can obtain disability cost savings through active implementation of workplace disability management programmes (Reiman et al. 2017). However, so far, the effectiveness of workplace disability management programmes for sustainable working careers is unclear (Gensby et al. 2014). According to the findings of this study, successful workplace- or work community-based collaboration with OHS actors improved the targeting of the work-related rehabilitation. In addition, successful employee case-based collaboration with OHS was central to the impact on work and working careers, especially among employees with disabilities.
New assignments of rehabilitation tasks with co-ordinated collaboration

The importance of work ability and disability for entering and maintaining employment, demands considerably more attention within social and health care and rehabilitation organisations, within labour administration and employment offices, and at workplaces and work organisations. Treatment and rehabilitation regimes, employment regimes and management regimes should equally support the sustainable employability of persons with temporary or permanent work disability and promote rehabilitee-/job-seeker-/employee-driven active collaboration in the action network of the work-related rehabilitation network in question. The multiperspective, tailored, systematically conducted assessment of people’s needs for work-related rehabilitation and re-employment should be prioritised. Proper long-term support and co-ordination for individuals and management of institutional multiactor collaboration during the process are essential.

The transformation of working life requires that vocational rehabilitation practices are developed in a more network-oriented way. Today, rehabilitation tasks are defined differently from the perspective of different branches of administration, organisations, sciences, professions, and clients. Thus, in order to improve their effects on extending working careers, rehabilitation processes and service packages should be integrated with the rehabilitee’s needs, the approach to work must be networked, and co-operation should be co-ordinated and cross institutional boundary fences. A model developed by a researcher offers a solution to this. This model aims to commonly define the role of the rehabilitation of working-age people from different perspectives and for different stakeholders. The model helps in setting the target, selecting partners and rehabilitation methods, structuring the co-operation arenas, and co-ordinating the points of the processes. The model is shown in Figure 3.
The model describes the tasks and the main goal of the rehabilitation of working-age people as well as the traditional medical-oriented or clinical point of view, but also does so from other perspectives. The need for rehabilitation is described on the vertical axis ranging from needs in terms of work or the working career and rehabilitation to needs in terms of coping in life or general managing in life. The rehabilitation approach is described on the horizontal axis ranging from an individual approach to a community-based approach. These two axes help formulate four-part rehabilitation tasks or assignments: work community-based rehabilitation, working career rehabilitation, community-based rehabilitation, and functioning and coping in life-focused rehabilitation.

This expands the traditional individual-based definition of the rehabilitation. In this model, work-related rehabilitation is a combination of those actions targeted at society and the individual to enable RTW and participation in working life. As in the
findings of Seing et al. (2012) and Seing (2014), here the work-related rehabilitation measures and solutions are based on the contextual negotiation process of different levels of society. An example of this kind of action-network policy and practice guidelines based on this approach is that for people with mental disorders, in this case the launcher of the network is psychiatry unit at a hospital is (Tuisku et al. 2013). When applied to the workplace context, the work (dis)ability and, working capacity of an individual is promoted in co-operation with the general development and well-being of the work organisation, and is not necessarily linked to a medical condition or disabilities. In the workplace-based model work-related rehabilitation, process would not be a separate activity, but the ability to work would increase along with the development of work. The conditions under which employers are willing to take on this type of collaborative task should also be considered.

The implementation of the model requires a highly developed understanding of interaction between a rehabilitee and a multiactor network, good co-ordination of individual processes and well-managed, tailored and co-ordinated collaboration in each stakeholder affiliation needed in the process. Systemic change simultaneously requires several things. The co-ordination of the collaboration in work-related rehabilitation should enable simultaneous monitoring of several issues from different perspectives.

### 6.2 Discussion on materials and methods

This study has several strengths and limitations. In the debate on the degree of strength of the research display, a RCT is considered a golden rule. Alongside the legitimisation, validity and the quality of qualitative research (Patton 1990, 1999, Seale 1999, Denzin and Lincoln 2005), case study research (Yin 2013) and mixed methods (Teddlie and Tashakkori 2003, 2006, Creswell & Plano Clark 2018) have been defined. Mixed-methods research, combining quantitative and qualitative approaches in research design and data collection, should be considered in research of complex phenomenon whenever possible, because it improves the validity and reliability of the resulting data and strengthens causal inferences by providing the opportunity to observe data convergence or divergence in hypothesis testing (Teddlie & Tashakkori 2009, Moore et al. 2015, Creswell & Plano Clark 2018). The objective in Sub-studies I-IV was to analyse both quantitative and qualitative findings together, this concept of a joint display (Fetters et al. 2013) varied in each sub-study. The integration of the data has been used in order to gain a more complete understanding (O’Cathain et al. 2010). We have no common good-quality mixed
methods study criteria. As a summary of the discussion in the literature, Creswell and Plano Clark (2018) listed the four issues for the core set of the minimum criteria. In conducting and evaluating a mixed method study, the researcher, ‘(1) collects and analyses both qualitative and quantitative data rigorously in response to research questions and hypotheses, (2) intentionally integrates (or mixes or combines) the two forms of data and their results, (3) organises these procedures into specific research designs that provide the logic for conducting the study, and (4) frames these procedures within theory and philosophy’ (Creswell & Plano Clark 2018).

**Strengths and limitations of the study**

The research design in Sub-study I was quasi-experimental with a control group, and was followed by two questionnaires and a register follow-up. In the others, the design was a multiple case study combined with the qualitative content analysis of Sub-study II, and the mixed methods of Sub-study III and IV (see Table 2). When the complexity of the studied social interventions are taken into account, the degree of the success of the research designs were good. The qualitative (Patton 1990, 1997, 1999, Seale 1999, Denzin & Lincoln 2005, Ruusuvuori et al. 2010) and mixed methodology (Johnson & Turner 2003, Teddlie & Tashakkori 2003, 2006, 2011) was used in a versatile way, and the research phenomenon and research questions guided the methodological choices (Seale 1999).

The generalisation of the intervention effects is weakened in Sub-study I by the lack of follow-up of the matched controls, by the lack of private sector work opportunities during the intervention, and by partial failure in the selection of the matched controls. The matched controls had poorer health ($p = 0.0001$) and longer unemployment periods ($p = 0.0006$) than the participants, although there was no difference in their work ability, which both of the groups considered to be low (Table 3). The comparison of the two interventions, the evaluation of the effectiveness of the needs-tailored intervention to ‘usual rehabilitation’ was also problematic. The matched controls’ ‘usual rehabilitation’ was only a few random services, in comparison to the participants’ intervention, which provided an integrated service package. In Sub-study II, participant interviews after participation in the project could have improved the outcome. The study design could have been improved in Sub-studies III and IV by including follow-up.

During the operationalisation of the setting and design of the case study, it was essential (Stake 1995, Yin 2003, Flyberg 2011) to decide which research design of the mixed methods (Teddlie & Tashakkori 2009, 2011, Creswell 2011, Creswell
& Plano Clark 2011, Creswell et al. 2011) were needed from the point of view of research subject and questions. The phenomenon to be studied and the research questions also defined, which tools were to be necessary (see Seale, 1999). In research processes that use the mixed method, the stages of multiple triangulation (Denzin 2009; Denzin and Lincoln, 2005) always occur when multiple data are brought together during data collection, and in several phases during the analysis, interpretation and reporting (Fetters et al. 2013). In the case study research tradition (Flyberg, 2011), mixed methods are understood mainly as a reliability-enhancing data triangulation (Ragin 1994), whereas in the case of mixed methods research, a case study is considered one alternative for the study design, in which data are merged on a case-by-case basis (Cresswell & Plano Clark 2011).

In this study, the designs of the case studies were based on the triangulation of both the data sources and methods, as well as on analyst triangulation, which strengthened validity (Patton 1999) and provided stronger inferences (Teddlie & Tashakkori 2009). Method triangulation and inter-method mixing was adopted to gain an in-depth understanding of the complex and multifaceted nature of the rehabilitation processes.

Mixed methods research is, according to Johnson et al.’s (2007) general definition, when a researcher or team of researchers combine elements of qualitative and quantitative approaches for the broad purpose of wider, deeper understanding and corroboration. Although all Sub-studies I–IV used the mixed methods study design, they can be classified as different types of mixed methods research such as quantitative dominant, qualitative dominant and equal or ‘pure’ mixed methods research (Johnson et al. 2007, Table 5).

The rehabilitees’ and rehabilitation professionals’ perspectives were included in all the sub-studies, but in Sub-studies I and II, the perspectives of other stakeholders were not systematically included as they were in Sub-studies III and IV. For improving research of complex interventions, the multiperspective (Magasi et al., 2009; Finch et al., 2012; Seppänen-Järvelä et al., 2015a, 2015b) approach is recommended. Multiperspective data also enable systematic study design-based merging or embedding of data (Fetters et al., 2013), which was not possible to the same extent in Sub-studies I and II, in which the interpretation and reporting was conducted as integration through the narrative (see Table 5)(Fetters et al. 2013).

The strength of Sub-study IV is its QCA, as this accepts diversity of the data, and every case matters. QCA is also a method that can strengthen validity (Yin 2013). In accordance with the main principles of qualitative research, results derived from QCA analysis have only a limited level of generalisation. In this study, the truth
tables from the data matrix were qualitatively composed. A limitation of this study was that we did not use the Boolean expression (Schneider & Wagemann 2012), which could have revealed some other combinations of conditions, and also analysed outcomes other than job retention. Another limitation of this study is that the data collection included no follow-up: the new model of work-related rehabilitation has the capacity to promote SAW, but its long-term effects are yet to be seen.

The routes, mechanisms and effects are the results of a complex review, which the study design and analysis methods (multiperspective, multiple case study, comparative analysis with QCA) enabled. This opened the black box of early-onset work-related rehabilitation interventions (Hararchi et al., 1999) and its work-related outcomes in a detailed way. The outcomes that promoted job retention are also described as a change in the attitude or action of the rehabilitee or other actors, or as a collaborative action or process of actions. When discussing effectiveness, we had no data on whether these discovered changes can lead to avoided or decreased sickness absences and permanent work disability rates, on the effects of early-onset work-related rehabilitation from the work community perspective, or on which of them mainly concern individuals.

The use of a mixed-methods approach and QCA in the evaluation of a work-related rehabilitation concept was a novelty. QCA techniques aim to integrate the case-oriented approach with the variable-oriented approach. This method enabled a systematic comparison of the researchers, and highlighted differences in interpretations of details in the common discussion. The lessons learned support earlier methodological findings: both in-depth qualitative knowledge of each case and the theory of change are essential (Schatz & Welle, 2016). However, despite this, our multidisciplinary research team faced various conflicting phases during data merging.

The across-case phase analysis was conducted in Sub-studies II and III using content analysis (Strauss, 1990, Patton, 1990, Ruusuvuori et al., 2010) and in Sub-study IV, QCA was added to the other qualitative method approaches (Schatz & Welle, 2016). The purpose of this was to refine the knowledge regarding the determinants of the outcomes by looking at the cases’ similarities and differences in terms of causal factors and the outcome obtained (Cress & Snow, 2000). In the impact evaluation field, QCA helps to explore why some interventions can achieve outcomes and others cannot. QCA is located between the qualitative case-oriented and quantitative variable oriented approaches (Rihoux & Ragin, 2009). An important element in this analysis was the identification of the ‘sufficient’ and ‘necessary’ conditions that occur in conjunction with an outcome (Schnedider & Wagemann...
Conditions interact and combine to produce an effect. This understanding is consistent with the complexity and realistic view of the realistic evaluation theory (Pawson & Tilley 1997).

In Sub-study IV, the analytical process was based on case-by-case and multiperspective descriptions of cases, and then the analysis of the cases in parallel. It was essential to look at each case in its own context (Ayres et al. 2003, Craig et al. 2008, Moore et al. 2015). The qualitative features of the cases were structured (Stake 1995) so that the features of the phenomenon could be detected and identified at the exact level (see Ayres et al. 2003). In this study, the multiperspective data contained many multilevel interpretative features such as interpersonal interaction and social structures. The challenge was to construct a new, constructive entity from single cases on a generalised level. The preliminary results of the same evaluation, targeted from different perspectives in a multidisciplinary team of researchers, may at first appear to be conflicting, but the analysis process did not end here; it continued and we reviewed the multiple data again. In this way, with the help of multidisciplinary competence it was possible to create a new, more justified interpretation. When the interpretation and reporting of materials was resumed, different types of data were analysed together and merged. When mixed method and multiperspective research is merged, that is, preliminary results are discussed at an early stage of analysis, the iteration procedure interferes with the interpretation throughout the process. In addition, the confirmation of validity is a result of comparing the results of different data and the findings in this critical view. The result therefore not only shows the separate results of qualitative or quantitative results, but is a joint display (see Fetters et al. 2013).

As a conclusion, the design of the case studies was based on triangulation; triangulation of the data sources and methods as well as analyst triangulation, and strengthened validity (Patton 1999, Yin 2013) and provided stronger inferences (Teddlie & Tashakkori 2009). Method triangulation and inter-method mixing was adopted to gain an in-depth understanding of the complex and multifaceted nature of the rehabilitation processes. Another strength of QCA is that it accepts diversity of the data and every case matters. QCA is also a method that can strengthen validity (Yin 2013). In accordance with the main principles of qualitative research, results derived from QCA analysis have only a limited level of generalisation. In Sub-study IV the truth tables were qualitatively composed from the data matrix. The limitation of this study was that we did not use the Boolean expression (Schneider & Wagemann 2012), which could have helped us find some other combinations of conditions and analyse outcomes other than job retention. The limitation of this study was also that the data collection did not include any follow-up.
6.3 Ethical considerations

Both the research projects went through the ethical preliminary examination of the study: the statement by the Regional Ethics Committee of the Northern Ostrobothnia Hospital District was given on the 25th January 2001 (10/2001), and by the ethical board of The Social Insurance Institution of Finland on the 11th of June 2012. The implementation of the research followed a good scientific approach. We carefully addressed voluntary and informed consent, participation, privacy, confidentiality, as well as and the preservation of anonymity at all stages of the research.

From an ethical point of view this was important research in two ways. First, a great deal of public funds are used in projects and in the development of social activities in European countries today, and it is important to evaluate and also study the outcomes and effects of these activities by scientifically valid methods to get the most utility out of them. As also shown here, the evaluation and the study of these activities for various reasons is not always easy to implement, but with the appropriate methods, is nonetheless feasible. The data that can be gathered from a single developmental and research project may be small, important issues can still be discovered. Another ethically important issue in this study was that the perspective of people in vulnerable labour market situations was focused on as much as the others.

6.4 Practical implications: Improving rehabilitees' involvement in shared decision-making, and a concept for better working career impacts

The results will help all actors, researchers and authorities involved in rehabilitation to improve the outcomes of work-related rehabilitation by developing opportunities for the rehabilitees' own agency, their own activities and collaboration. Next, I discuss the implications for practice more detail.

*Rehabilitees' involvement in shared decision-making*

The finding of the importance of one’s own agency and shared agency highlights the following issues. First, it is important for the individual to be heard when describing how complicated the situation may be: all the possible barriers and the facilitators for the process of one’s life and work situation should be carefully discussed. Second, rehabilitees should receive help in designing own goals: in
work-related rehabilitation, sometimes it takes time to understand what these goals should be, and sustainable working career options, for example, are sometimes hard to determine. Third, rehabilitees should also ask and obtain information on, for example, optional services for their knowledge-based opportunities to choose and act. In addition to support, rehabilitees should have opportunities to be involved in shared decision-making throughout the rehabilitation process.

**Work-related rehabilitation concept for better working career impacts**

The study shows that the collaboration and process concept through which better working career impacts could be achieved should include five crucial items. As a starting point, it should include the knowledge of people’s needs for rehabilitation and an understanding of individuals’ job retention and RTW behaviour, and the reasons for these behaviours. The professionals should also be familiar with the social and cultural context of people’s everyday lives. Second, the quality of the interaction in the counselling process, rehabilitees’ true opportunities to choose and act, and empowerment of rehabilitees’ own agency in a goal-oriented process based on their individual needs with long and sufficiently intensive co-ordination and follow-up. Third, the quality of the tailored multiactor collaboration itself, collaboration between the agencies and the individual, integrated holistic service for multiagency clients, enhancing the tailoring of processes by identifying indicators for recognising individuals who have greater needs for support, and the different stakeholders’ sufficiently shared view of the goals and means of rehabilitation. Fourth, involvement of representatives from the workplace, employment office and health service or OHS provider, searching for jobs from both private and public employers, and good communication regarding the work and work-place modifications required. Fifth, regionally agreed, and managed collaboration procedures between agencies, in addition to the co-ordination of the multistage process of the work-related rehabilitation practices, should include arenas for collaboration, in which rehabilitees and all the stakeholders needed can equally participate, accumulate regional information, combine information on projects from both individual and system-centric approaches, and improve the procedures and services regionally implementing the results. Table 11 summarises the key factors of the collaboration and process concepts through which better working career impacts can be achieved.
Table 11. Make room for the rehabilitee’s empowerment and collaborate: five key factors for success in multidisciplinary work-related rehabilitation

<table>
<thead>
<tr>
<th>Number</th>
<th>Key Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Early recognition of the need for rehabilitation.</td>
</tr>
<tr>
<td>2</td>
<td>Goal-setting and planning of the rehabilitation process with the rehabilitee.</td>
</tr>
<tr>
<td>3</td>
<td>Collaboration: sufficient multidisciplinary know-how and resources in ‘scanning’, planning and carrying out the rehabilitation.</td>
</tr>
<tr>
<td>4</td>
<td>Agreed (sufficiently) long-term follow-up, and if change is needed, agreement on new solutions.</td>
</tr>
<tr>
<td>5</td>
<td>Regionally agreed and managed collaboration procedures in the work-related rehabilitation.</td>
</tr>
</tbody>
</table>

6.5 Recommendations for further research

Further research is needed for better understanding the outcomes of social interventions such as work-related rehabilitation in a complex system. Determining the facilitators of and obstacles to the processes is essential, but also, in order to determine the mechanisms, multiperspective data and mixed method approaches are needed. The mechanisms should also be studied from the perspective of the complexity of the macro processes in vocational rehabilitation; for example, what is the role of the ‘shareowners’? The research interests should be in both the outcome and the intervention, in what actually happens during the intervention. This enables us to understand the outcome data (Weiss 1998): the routes, processes and mechanisms through which re-employment, job retention or RTW outcomes are achieved. In addition, when using RCTs, assessment of the effectiveness of the rehabilitation must also take into account the implementation process of the rehabilitation, and the examination and description of the mechanisms of the possible outcome.

Topics emerging from this research that could require further study are: How can we enhance proper interaction and collaboration, what kind of forums are needed? What about digital based communication, what should be recognised in the interaction? What kind of interaction could support multiagency collaboration for positive outcomes of the required collaboration? More research is also needed on the formation and scope of the shared agency in these kinds of complex work-related intervention processes.
References


List of original publications


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Original publications are not included in the electronic version of the dissertation.
Into work, through tailored paths: a two-year follow-up of the return-to-work rehabilitation and re-employment project

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Between the years 1996 and 2000, over 2000 projects were carried out in Finland with the aim of finding innovative measures for crossing the job threshold. Among them was the Pathway-to-Work Project, which aimed at tailoring return-to-work plans for 140 middle-aged, long-term unemployed participants with various disabilities and getting half of them into work or training. This study of the Pathway-to-Work Project had two research objectives. First, to evaluate the outcomes of the return-to-work rehabilitation project and second, to determine what combination of different measures seemed necessary and effective in the rehabilitation of long-term unemployed people with disabilities. The research design comprised three parts: a quantitative quasi-experimental part with a matched control group, a register follow-up and the collection of qualitative data. The main variables used to evaluate the outcomes were (1) the changes in the labour market situation during the 2-year register follow-up, (2) the changes in distress (measured by the General Health Questionnaire-12), perceived competence (measured by Wallston’s Self-Performance Survey) and sense of coherence (measured by Antonovsky’s SOC-13) during the intervention and (3) the description of the process in the project. In the 1-year follow-up, 31% of the participants were found to be at work and 37% unemployed. In the 2-year follow-up, 14% were at work and 59% unemployed. The jobs seemed to be subsidized for a period of half a year to a year. The difference between the project group and the matched control group was remarkable: at the end of the project, only 9% of the control group were at work and 86% unemployed. The participants' distress level decreased remarkably and their perceived competence increased, but their sense of coherence did not change. The results showed that even carefully tailored client work enables only some of the long-term unemployed people with disabilities to cross the job threshold and that other means of policy, strategy and intervention are needed to link the return-to-work interventions more closely with work, work places and enterprises.
La diferencia entre el grupo del proyecto y el grupo control fue considerable: al final del proyecto, solo el 9% del grupo control trabajaba, mientras que el 86% seguía desempleado. Los puestos de trabajo estaban subvencionados durante un periodo de seis meses a un año.

La investigaciones constó de tres partes: una parte cuasi-experimental cuantitativa de comparación con un grupo control, una parte de seguimiento y una parte de recogida de datos cualitativos. Las principales variables utilizadas para la evaluación de los resultados fueron: (1) los cambios en la situación del mercado de trabajo producidos durante los 2 años de seguimiento, (2) los cambios en la angustia sentida (determinados mediante el Cuestionario de Salud General-12), en la competencia propia percibida (mediante el Cuestionario sobre la Autocompetencia de Wallston) y en el sentimiento de coherencia (mediante el Cuestionario SOC-13 de Antonovsky) durante la intervención, y (3) la descripción del proceso en el proyecto. En el seguimiento realizado al cabo de un año, el 31% de los participantes estaba trabajando y el 37% estaba desempleado. En el seguimiento realizado a los dos años, el 14% estaba trabajando y el 59% estaba desempleado. Los puestos de trabajo estaban subvencionados durante un periodo de seis meses a un año. La diferencia entre el grupo del proyecto y el grupo control fue considerable: al final del proyecto, solo el 9% del grupo control trabajaba, mientras que el 86% seguía desempleado. El nivel de angustia de los participantes se redujo considerablemente y aumentó su competencia percibida, mientras que no cambió su sentimiento de coherencia. Los resultados indican que incluso medidas cuidadosamente personalizadas sólo consiguen la reinserción laboral de algunos desempleados de larga duración con discapacidad, y que se necesitan otras medidas, estrategias e intervenciones para estimular el vínculo entre las intervenciones orientadas a la reinserción laboral, por un lado, y el trabajo, los lugares de trabajo y las empresas, por otro.

**Keywords:** disability; intervention/programme; long-term unemployment; outcome; follow-up; rehabilitation; working capacity

Introduction
Ill health, unemployment and outcomes of rehabilitation

At the beginning of 1990s, the unemployment rate in Finland, as well as many other European countries such as Belgium, Spain, Italy, Greece, France and Germany was at a high level. Though it decreased towards the end of the decade, it stayed at a considerably higher level in Finland (Statistics Finland, 2001a). In fact, unemployment affected many more people in the 1990s than the official, published figures indicate. For example, the published unemployment rate in 1995–2000 varied between 11.7% and 17.1% (Statistics Finland 2001b), but research findings show that yearly 30–40% of the labour force in Finland were unemployed or seeking a job at the beginning of the 1990s and that the mean length of the unemployment was over 6 months (Suikkanen et al., 1998). In this mass unemployment situation, Finland’s employment policy was not successful. It brought the long-term unemployment problem to a new high, where middle-aged people with disabilities seemed to have the most difficulty in finding re-employment (Vähätalo et al., 1997; Suikkanen and Linnakangas, 2000).

The social phenomena of work disability and long-term unemployment are shaped both by individual factors and societal issues (Mannila, 1993). Research has shown that the profile of multidimensional deprivation related to ill health in Finland was the same in the 1980s as in the 1990s (Mannila and Peltoniemi, 1997). The two phenomena were linked together in the 1980s and their relationship was strengthened by structural factors such as age, generation, region and socio-economic status (Mannila et al., 1995); in the 1990s they were linked to more serious indicators of deprivation (Mannila and Peltoniemi, 1997). Besides ill health, this multidimensional deprivation was also linked to inadequate education and premature exclusion from work (Mannila and Peltoniemi, 1997).

The strategies that have been tried-out in efforts to cope with unemployment in Finland and elsewhere in Europe have included such interventions as job-search programmes, programmes for improving work capacity or ability, group-support programmes, work tryouts, training and subsidized or otherwise supported placements (Thornton and Lunt, 1995; Tervahartiala et al., 1996; Thornton and Lunt, 1997; Marnetoft et al., 1999). The studies that have reported on the impact of the programmes have usually focused on re-employment. In these studies, the impacts and qualities of interventions carried out for the unempl oyed have rarely been evaluated in relation to the amount of action taken. Another problem for such studies is created by their methodological and other problems (Tervahartiala et al., 1996; Järvikoski, 2002), which complicate the possible conclusions. International studies have produced evidence of positive impacts achieved in the rehabilitation of long-term unemployed people, whether with or without disabilities (Marnetoft et al., 1999; Marnetoft and Selander, 2000; Marnetoft et al., 2001; Järvikoski, 2002), but the applicability in Finland of the rehabilitation methods used in other countries is not self-evident and needs further study (Lindh and Piirainen, 1999; Mannila and Laisola-Nuotio, 2002).

In the light of Finnish research on the action taken with long-term unemployed people with disabilities, whether they had been assigned to vocational rehabilitation or interventions of employment policy, it seems that the interventions aimed at supporting the job search and re-employment should concentrate on action that is related to work or the work place. The process also seems to call for concrete co-operation at the institutional level, support for the improvement of health resources and strengthening those personal and social resources that facilitate the participant’s job search and re-employment prospects. Any needs assessment carried out should be extended to assessing the participant’s working ability with a view to retirement where relevant (Haapanen et al., 1994; Pekurinen et al., 1994; Niemelä et al., 1995; Tervahartiala et al., 1996; Vähätalo et al., 1997; Järvikoski et al., 1999; Järvikoski et al., 2000; Silvonen and Vuori, 2000; Järvikoski, 2002; Mannila and Laisola-Nuotio, 2002).

Between the years 1996 and 2000, over 2000 projects were carried out in Finland, financed by Community Initiative (CI) Adapt, CI Employment and European Social Fund Objective 3, with the aim of finding innovative measures for crossing the job threshold. An evaluation of these projects showed weak signals of variety of good practices including case management and local development of transitional labour market activities, and redefinition of peripherality showed some promise (Mannila et al., 1999, 2001a,b).

The societal setting and goals of the project

The Pathway-to-Work Project was carried out in North Ostrobothnia by the Rehabilitation Unit of Oulu University Hospital in the years 1995–1998. It was a development project for the rehabilitation and re-employment of jobless people with disabilities. The participants of the project came from 15 of the 42 municipalities in North Ostrobothnia. According to
the employment service statistics of the Ministry of Labour, the unemployment rate decreased by 6.5% from 1995 to 2000, going down from 20.4% to 13.9% (Employment Service Statistics of the Finnish Ministry of Labour, 1995–2000), while the decrease was as much as 9.9% in the 15 municipalities participating the project (Table 1). At the same time, however, the proportion of long-term unemployed (that is, at least 12 months of unemployment) of all unemployed people in these municipalities continued to increase until 1997, when it began to decrease (Table 1). The proportion of disabled job seekers of all unemployed people increased from 8.8% in 1997 to 12.5% in 2000 (Table 1). Though the total unemployment rate decreased in the participating municipalities, it still remained at a remarkably high level. The increases in the proportion of long-term unemployed of all unemployed up to 1997 and in the proportion of disabled jobseekers of all unemployed people throughout the follow-up period paralleled the situation in the whole of Finland at the end of the 1990s (Suikkanen and Linnakangas, 2000).

For its target group, the project selected unemployed people whose chances of re-employment seemed very slim. The aim was to tailor solutions for all participants and to get as many as half of them employed or alternatively into long-term training during the project, in which each individual was supposed to participate for 10–12 months. The main means were case management, assessment of each participant’s working ability, training, work tryouts and subsidized placement.

The assessment of working ability was organized as a routine out-patient service at the Rehabilitation Unit of Oulu University Hospital. Case management can be seen as a disability management tool (Akabas et al., 1992; Piirainen, 1995) or, as in this project, as individual work-oriented guidance, counselling and co-operation within the service system (Mannila, 2001b), especially with the local employment office and the municipal authorities. In this process, the needs of the jobless people were meant to be met with individual guidance and counselling. The other client service phases consisted of training in a group support programme, tailored vocational training, work tryouts at workplaces and subsidised placement.

The purpose of the present study

The purpose of the present follow-up study was to describe the processes of the return-to-work rehabilitation and re-employment in the project and to evaluate its outcomes. Another purpose was to evaluate what measures were effective in the return-to-work rehabilitation services for long-term unemployed people with disabilities. A multidimensional approach (Jalava and Virtanen, 1998) was chosen for the evaluation to try to find out the different qualities of effectiveness and to get a better understanding of the processes and mechanisms involved. Here, quantitative and qualitative research are combined in order to produce a general picture (Seale, 1999) and to examine context, mechanisms and outcomes (Pawson and Tilley, 1997).

Materials and methods

Participants and methods

For participation in the project, volunteers were looked for who were at least 35 years of age, were long-term unemployed and had disabilities. From the beginning of the project in November 1995 to the end in December 1998, 140 clients started in the project.

The research design included a quantitative quasi-experimental part with a matched control group, a register follow-up and the collection of qualitative data. The procedure followed in the collection of participant data was as shown in Figure 1. The main variables used to evaluate the outcomes were the changes in the participants’ psychosocial quality of life, which included distress, perceived competence and sense of coherence and the changes in their labour market situations. Distress was measured by means of the 12-item version of the General Health Questionnaire (GHQ-12; see Goldberg, 1972; Härkäpää, 1992; Järvelä et al., 1999), perceived competence by means of Wallston’s Self Performance Survey in its Finnish 8-item version (WSPS; see Smith et al., 1991;
Wallston, 1992; Härkäpää, 1995) and sense of coherence by means of the 13-item version of Antonovsky’s SOC (ASOC-13; see Antonovsky, 1987, 1993; Järviskoski et al., 1999; Feldt, 2000). Distress and perceived competence were measured three times during the intervention: at the beginning, after six months and at the end of participation in the project. Sense of coherence was measured two times, at the beginning and at the end of the project.

The data on the changes in labour market situation for each participant were collected by means of an interview with the participant at the end of their participation in the project and from the register of the Ministry of Labour 6, 12 and 24 months after the end of their participation in the project.

The matched control group for the quasi-experimental part of the study were selected from jobless people in the same geographical area as the participants according to the listings of the regional employment office. The following criteria were used in the selection: age, sex, long-term unemployment (at least 12 months continuously or 12 months in 2 years), occupational status according to the classification of the Ministry of Labour and the possible disabilities or known special needs regarding employment. The research data on the control group were collected cross-sectionally. For each control participant, this included two questionnaires, a register follow-up of the support and re-employment activities offered and taken as regular employment office services by the control participant during the period when their participant pair was involved in the project, and the labour market situation of the control participant at the end of the follow-up period. The control

Fig. 1. The data collection procedures and the kinds of data collected from the participants in the quasi-experimental study design and register follow-up along each phase of the project.
participant’s follow-up period was the same length as their participant pair’s involvement in the project.

Qualitative data about the processes and the setting were collected (Pawson and Tilley, 1997; Seale, 1999). Some details of the context were clarified by two interviews, two reports and regional statistics. One project manager was interviewed by telephone. The staff of the project were team interviewed. The two Finnish publications of the project pertaining to the years 1995–1996 were also used as material and so were the employment service statistics of the Ministry of Labour for North Ostrobothnia (Employment Service Statistics of the Finnish Ministry of Labour, 1995–1996, 1997–2000). The main process variables were the description of the activities tailored for the participants during the service process and the lengths of these various phases.

The questionnaire response rate and the background variables

The questionnaire response rate of the participants was 92.3%. Out of the five questionnaire forms filled in by members of the staff, only 0.4% were missing. The register follow-up data were gathered from 140 participants and only two were missing in the 1-year and 2-year follow-ups. Each participant had a matched control participant and the response rate of the matched control group to the two questionnaires was 63%. Register follow-up data were gathered for each of 140 matched control participants.

The background profiles of the men and women participating are presented in Table 2. The profiles were quite similar. Although 57% of the men and 63% of the women reported being single, only half of them lived alone. Inadequate basic education was reported by only 11% of men and 7% women, but only 40% of the men and 37% of the women reported a vocational education adequate for re-employment. The mean of the participants’ work history was 17 years, with 67% of the men and 68% of the women having worked as blue-collar workers. Almost half of the participants and control group reported the main reason for their unemployment was that their last employment contracts had been temporary. Thirty-five per cent of the participants and 30% of the control group had been given notice to quit. Ill health was the main reason for quitting working for 7% of the participants and for 3% of the control group. The respondents of both sexes had been unemployed for over 2 years on average. Unemployment benefit was the main income for 93% of the men and 82% of the women. For both sexes, the self-estimation of health and working ability were poor, the women’s estimates of their health and work ability being worse, but only 15% of the men and 12% of the women classified themselves as unfit to work. The main diagnoses classified by a physician according to the ICD-10 (WHO, 1992), were psychiatric diseases (n = 33), skeletonmuscular disorders (n = 25), asthma and other lung diseases (n = 20) and problems related to unemployment (n = 20). According to the physician’s assessment, 10% of the participants had quite poor or poor work ability.

The outcome of the matching is presented in Table 3. There are not many differences. The matched control group had been unemployed longer. Both groups had poor vocational educational backgrounds, but the backgrounds of the control group were a little weaker and the experience of their own health was poorer. There were no differences in the quality of psychosocial life by distress, perceived competence and sense of coherence.

Table 2. The background profiles of the men and women participating

<table>
<thead>
<tr>
<th>Variable</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>59%</td>
<td>41%</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32–45</td>
<td>57%</td>
<td>65%</td>
</tr>
<tr>
<td>46–65</td>
<td>43%</td>
<td>35%</td>
</tr>
<tr>
<td>Social situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living with own parents</td>
<td>16%</td>
<td>5%</td>
</tr>
<tr>
<td>Living alone</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Living in own family</td>
<td>51%</td>
<td>65%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>0</td>
</tr>
<tr>
<td>Vocational education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No vocational education</td>
<td>33%</td>
<td>35%</td>
</tr>
<tr>
<td>Short-term, e.g. courses</td>
<td>27%</td>
<td>28%</td>
</tr>
<tr>
<td>Graduated from vocational</td>
<td>40%</td>
<td>37%</td>
</tr>
<tr>
<td>educational institution or college</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of work history (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6–15</td>
<td>33%</td>
<td>51%</td>
</tr>
<tr>
<td>16–25</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>26+</td>
<td>24%</td>
<td>11%</td>
</tr>
<tr>
<td>Duration of unemployment (years)</td>
<td>Mean</td>
<td>2.6</td>
</tr>
<tr>
<td>Self-estimation of health</td>
<td>Mean (visual analogue scale)</td>
<td>5.8</td>
</tr>
<tr>
<td>Self-estimation of working ability</td>
<td>Mean (visual analogue scale)</td>
<td>5.9</td>
</tr>
<tr>
<td>Self-estimation of the frequency of different diseases</td>
<td>4.7</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. The outcome of matching the groups according to the selected criteria of long-term unemployment, age, sex, occupational status and possible disabilities

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participant group</th>
<th>Matched control group</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>mean=44, min–max=32–54</td>
<td>mean=46, min–max=36–55</td>
<td>0.1021</td>
</tr>
<tr>
<td>Sex</td>
<td>55 male, 33 female</td>
<td>55 male, 33 female</td>
<td></td>
</tr>
<tr>
<td>Length of work history (years)</td>
<td>mean=18, min–max=0.5–35</td>
<td>mean=20, min–max=1–40</td>
<td>0.1563</td>
</tr>
<tr>
<td>Uninterrupted unemployment (months)</td>
<td>mean=39, min–max=9–132</td>
<td>mean=50, min–max=5–120</td>
<td>0.0006</td>
</tr>
<tr>
<td>Mean frequency of diagnoses</td>
<td>5.3</td>
<td>4.4</td>
<td>0.2721</td>
</tr>
<tr>
<td>Self-estimation of health (visual analogue scale)</td>
<td>5.5</td>
<td>2.8</td>
<td>0.0001</td>
</tr>
<tr>
<td>Self-estimation of working ability (visual analogue scale)</td>
<td>5.9</td>
<td>5.8</td>
<td>0.9265</td>
</tr>
<tr>
<td>Distress (GHQ-12 mean)</td>
<td>4.26</td>
<td>3.77</td>
<td>0.4682</td>
</tr>
<tr>
<td>Perceived competence (WSPS mean)</td>
<td>33.7</td>
<td>33.4</td>
<td>0.7920</td>
</tr>
<tr>
<td>Sense of coherence (ASOC-13 mean)</td>
<td>45.34</td>
<td>45.52</td>
<td>0.9276</td>
</tr>
</tbody>
</table>

Statistical methods

The material was analysed by means of the SAS program (version 6.06) at the Department of Public Health Science and General Practice of the Faculty of Medicine, University of Oulu. The results were expressed as crude frequencies, proportions, crude ratios and means. The changes in the groups are presented in cross-tabulations. The statistical significances were calculated by means of the Pearson’s χ²-test or, when appropriate, the Fisher’s exact test. To calculate the statistical significance of the continuous variables of ASOC-13, the GHQ-12 and WSPS when only two groups were compared, the Wilcoxon matched-pairs test was used.

The statistical significance of the change in mean values of the continuous variables of the GHQ-12 and WSPS, when more than two groups were compared, was analysed by means of a two-way analysis of variance and repeated variance analysis and Welch variance analysis. The continuous variables of the GHQ-12 were dichotomized by using cut-off points of ≤ 2 and ≥ 3. Also in calculating the statistical significances of the between-groups cross-tabulations, the χ²-test or, when appropriate, the Fisher’s exact test were used. The statistical significance of the continuous variables of the GHQ-12, WSPS and ASOC-13 were analysed by means of the Wilcoxon matched pairs test.

Results

The tailored service through case management, co-operative networking and multidisciplinary backup

The client service process was as follows (see Fig. 1). The vocational rehabilitation counsellor first interviewed all clients who wanted to participate in the project. During the interview the client was given the option of not joining the project without any negative consequences. The staff reported that very few chose not to participate. All the participants took part in the assessment of working ability. The assessment phase lasted 4–6 weeks on average and other project activities, for example, training, could take place during this period. On the basis of the conclusions and recommendations from the assessments of working ability, the vocational rehabilitation counsellor assigned the participants to different kinds of training, work tryouts and subsidized jobs.

After the assessment, 108 of the 140 clients took part in a 6-week training and rehabilitation course using the group-support method. After this course the counsellors looked for the work tryout places or vocational training courses co-operatively with their clients. The work tryout places were mainly found in public organizations and they often turned into subsidized placements after the work tryout phase. Altogether 78 clients were working at one work tryout place for 64 days on average and 12 at the second for 49 days on average. During the project 76 participants took part in a vocational training course, which lasted 15 weeks on average. A few participants continued to be on sick leave from the very beginning. The mean length of individual participation in the project was 10 months, varying from 2 to 18 months. The 24 different individually tailored pathways, in four main categories, that is, the service processes of the project, are shown in Table 4. There were 10 different pathways to work tailored for a total of 63 participants; seven different pathways to training were taken by a total of 52 participants; there were six different pathways to work tryout and these were taken by 20 participants; and finally, five participants took part in the assessment of working ability phase only.
The matched control group was offered the following employment and supportive interventions with the following outcomes: 20 of them (14%) received supportive measures and 57 (41%) were asked to attend a work interview during the 10-month mean follow-up period; eight (5%) of these got a placement. Fourteen took part in an interview at a state-owned workplace and two of these got a subsidized placement. Forty-one took part in work interviews at municipal workplaces, with one getting a temporary job and four a subsidized placement. Sixteen took part in a work interview at a private enterprise, with one getting a permanent job. Five took part in a work interview at a third-sector workplace but none got employed. Of the twelve who were asked to attend some training, only five attended. Of the twelve who were sent to some other projects, none attended. One took part in an assessment of working ability, one in career guidance and counselling and two in a work tryout. For 14 matched control participants some other rehabilitative measures were taken.

Many concrete ways of co-operation between the local employment office and the project were found. The project employed vocational rehabilitation counsellors from the employment office and at the beginning they were able to interview clients at the office. Throughout the project the counsellors were well informed of the individual issues and possibilities that the employment office could give. This exceptionally tailored co-operation between the service provider, the rehabilitation unit and the local employment office empowered the case managers to act.

The change in the participants’ psychosocial quality of life: decreased distress

The participants’ distress level, as measured by the GHQ-12 (Tables 5 and 6), decreased during the first 6 months.
months very significantly. Though the distress level increased again at the end of the project, it was still significantly lower than at the beginning. This was also shown in a two-way variance analysis, where $F$ (Welch) was 5.3 with 2.191 degrees of freedom and $P < 0.01$. With cut-off points at 0–2 and > 3, the change in the frequency in the subgroups was similar to the change in the means: the number of those who were not distressed increased very significantly during the first 6 months and though this number decreased later, it was still significantly higher at the end than at the beginning of the project. The increase in perceived competence, as measured by WSPS, was significant at the end of the project (Table 6), but the change did not reach the level of significance in the variance analysis, where $F$ (repeated variance analysis) = 1.33 with 2 degrees of freedom and $P > 0.05$. The change in the sense of coherence, as measured by ASOC-13, was not significant (Tables 5 and 6).

**The changes in the labour market situation: differentiation of life situations**

The changes in the participants’ labour market situations are presented in Table 7. Nearly half of the participants got a job by the end of their participation in the project and 14% of them were working at the time of the 2-year follow-up (Table 7). The workplaces seemed to be subsidized for 6–12 months, because there was a significant change back to unemployment after 6 months ($P = 0.0150$) and a very significant one after 12 months ($P = 0.0000$) (Table 7, Fig. 2). The other paths taken were as follows: 11 participants were working throughout the follow-up period (Fig. 2) and 10 were in training after

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**Table 5.** Means and the significance of the changes over time in the participants’ psychosocial quality of life

<table>
<thead>
<tr>
<th>Measure</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>$P (A \rightarrow B)$</th>
<th>$P (B \rightarrow C)$</th>
<th>$P (A \rightarrow C)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHQ-12</td>
<td>n 129</td>
<td>117</td>
<td>117</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mean 4.047</td>
<td>2.316</td>
<td>2.419</td>
<td>0.0004</td>
<td>0.5981</td>
<td>0.0019</td>
</tr>
<tr>
<td></td>
<td>value 0–2 n (%)</td>
<td>62 (48.1%)</td>
<td>83 (70.9%)</td>
<td>7 (65.8%)</td>
<td>0.0003</td>
<td>0.3990</td>
</tr>
<tr>
<td></td>
<td>value &gt; 3 n (%)</td>
<td>67 (51.9%)</td>
<td>34 (29.1%)</td>
<td>40 (34.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>missing n 11</td>
<td>23</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WSPS</td>
<td>n 124</td>
<td>111</td>
<td>117</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mean 33.629</td>
<td>33.640</td>
<td>35.120</td>
<td>0.1487</td>
<td>0.6611</td>
<td>0.0620</td>
</tr>
<tr>
<td></td>
<td>missing n 16</td>
<td>29</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASOC-13</td>
<td>n 120</td>
<td>110</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mean 61.233</td>
<td>62.290</td>
<td>30</td>
<td></td>
<td></td>
<td>0.4472</td>
</tr>
<tr>
<td></td>
<td>missing n 20</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distress was measured by means of the General Health Questionnaire (GHQ-12), perceived competence by the means of Wallston’s Self Performance Survey (WSPS) and sense of coherence by the Antonovsky’s SOC-13 (ASOC-13). The measurements were done at the beginning of the project (A), during the 10-month period (B) and at the end of the project (C).

**Table 6.** The changes in the means and the significance of the differences in the participants’ psychosocial quality of life, by matched-pair tests

<table>
<thead>
<tr>
<th>Measure</th>
<th>A → B</th>
<th>B → C</th>
<th>A → C</th>
<th>$P (A \rightarrow B)$</th>
<th>$P (B \rightarrow C)$</th>
<th>$P (A \rightarrow C)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distress change in mean</td>
<td>n 108</td>
<td>105</td>
<td>108</td>
<td>−1.593</td>
<td>0.248</td>
<td>−1.528</td>
</tr>
<tr>
<td>Perceived competence change</td>
<td>n 100</td>
<td>101</td>
<td>104</td>
<td>1.010</td>
<td>0.634</td>
<td>2.077</td>
</tr>
<tr>
<td>Sense of coherence change</td>
<td>n 98</td>
<td></td>
<td>98</td>
<td>1.684</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distress was measured by the means of the General Health Questionnaire, perceived competence by the means of Wallston’s Self Performance Survey and sense of coherence by the Antonovsky’s SOC-13. The measurements were done at the beginning, in the intermediate follow-up and at the end of the project. A → B, the first 6 months; B → C, the last 4 months; A → C, during the 10-month period.
### Table 7. The changes in the participants’ labour market situation over the follow-up time and the significance of the changes

<table>
<thead>
<tr>
<th>Status</th>
<th>A Frequency (column %)</th>
<th>B Frequency (column %)</th>
<th>C Frequency (column %)</th>
<th>D Frequency (column %)</th>
<th>P (A → B)</th>
<th>P (B → C)</th>
<th>P (C → D)</th>
<th>P (A → C)</th>
<th>P (A → D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At work</td>
<td>67</td>
<td>50</td>
<td>44</td>
<td>20</td>
<td>0.0394</td>
<td>0.4477</td>
<td>0.0006</td>
<td>0.0050</td>
<td>0.0000</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>36</td>
<td>31</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In training</td>
<td>21</td>
<td>21</td>
<td>15</td>
<td>11</td>
<td>1.0000</td>
<td>0.2841</td>
<td>0.4191</td>
<td>0.2841</td>
<td>0.0603</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>15</td>
<td>11</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On sick leave/retired</td>
<td>29</td>
<td>27</td>
<td>24</td>
<td>22</td>
<td>0.7651</td>
<td>0.6423</td>
<td>0.7470</td>
<td>0.4456</td>
<td>0.2784</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>19</td>
<td>17</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>23</td>
<td>40</td>
<td>52</td>
<td>83</td>
<td>0.0150</td>
<td>0.1268</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>29</td>
<td>37</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other/not known</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>*0.4982</td>
<td>*0.4472</td>
<td>*1.0000</td>
<td>*0.0603</td>
<td>*0.1223</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The statistical significances were calculated by means of the Pearson’s χ²-test or, where marked with *, the Fisher’s exact test (two-tailed). A, at the end of the project; B, register follow-up after 6 months; C, register follow-up after 12 months; D, register follow-up after 24 months.

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**Fig. 2.** The changes in the labour market situation of the participants who were in work at the end of the project (n=67).

1 year (Fig. 3), with two of them getting a job after their training (Fig. 3). Of the participants who were on sick leave at the end of the project, 72% were on sick leave after a year and 59% after 2 years (Fig. 4). Of the participants who were unemployed at the end of the project, 61% were unemployed throughout the follow-up period (Fig. 5).

The difference between the labour market situations of the participants and the matched control group at the end of the project was very significant (Table 8): while 48% of the participants were at work at the end of the project, only 9% of the matched control group were at work ($P=0.0000$) and while only 16% of the

### Table 8. The labour market situation of the participants and the matched control group at the end of the project (means at 10 months on average after the first interview)

<table>
<thead>
<tr>
<th>Status</th>
<th>Participants (frequency/column %)</th>
<th>Matched control (frequency/column %)</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>At work</td>
<td>67/48</td>
<td>12/9</td>
<td>0.0000</td>
</tr>
<tr>
<td>In training</td>
<td>21/15</td>
<td>4/3</td>
<td>0.0004</td>
</tr>
<tr>
<td>On sick leave/retired</td>
<td>29/21</td>
<td>3/2</td>
<td>0.0000</td>
</tr>
<tr>
<td>Unemployed</td>
<td>23/16</td>
<td>120/86</td>
<td>0.0000</td>
</tr>
<tr>
<td>Other/not known</td>
<td>0/–</td>
<td>1/1</td>
<td>*1.0000</td>
</tr>
<tr>
<td>Total</td>
<td>140/100</td>
<td>140/100</td>
<td></td>
</tr>
</tbody>
</table>

The statistical significance was calculated by Pearson’s $\chi^2$-test or, when marked with *, the Fisher’s Exact test (two-tailed).

*Fig. 3. The changes in the labour market situation of the participants who were in training at the end of the project (n=21).*
participants were unemployed at the end of the project, as many as 86% of the control group were still unemployed ($P=0.0000$).

**Discussion**

*The degree of the success of the research design*

The research design was quasi-experimental with the control group, which was followed by two questionnaires and a register follow-up. The selection of participants and matched control participants was done non-randomly from the routine service queue at the local employment office. Although the participant group and the matched control group represented the middle-aged, long-term unemployed people with disabilities of the municipalities concerned quite well, there were differences, whose quality and effects are not known, in the selection of the two groups. The outcome of the matching is satisfying, however. The matched control group had been unemployed longer, had poorer vocational education, were living alone more often, had somewhat more income problems and had a more pessimistic view of the future than the participants, but on the other hand their estimations of their health and work options were better than...
those of participants and there were no differences between the two groups in the psychosocial quality of life. There may be some testing effect here. The loss of participants from the project and control groups was differential and there were no follow-up data for the matched control group after the project. The participants showed a very good response rate, the loss of forms filled in by the staff members was very low and the response rate of the matched control participants was also sufficient. In conclusion, one can say that the matching succeeded quite well, but the lack of follow-up data on the matched control group and the differences in the selection of the participants and the control group weaken the comparison to some extend.

The participants were empowered

The return-to-work rehabilitation and re-employment intervention carried out in the project improved the participants' psychosocial quality of life. The combination of case management (which consisted of personal guidance and counselling), assessment of working ability and training in the group-support programme succeeded in supporting jobless disabled people in their return-to-work rehabilitation. Their distress decreased and there was some improvement in their perceived competence, but their sense of coherence did not change. This outcome had personal importance, but further research is needed to determine whether it will also have consequences such as a
had got short-term employment and one with more or less help from the project while others the long-term unemployed people (16%) had retired.

Changes in the participants' life situation were still in point of view of long-term unemployment. The they can still be regarded as positive outcomes from temporary changes in the participants' life situation, the project. Though some of them brought only different models of tailored paths implemented during group. There were four main categories and 24 in comparison with those of the matched control people changed very significantly during the project, and quantity of the used supportive interventions with the same, more or less obtained, whether still other, more specific means have changed the number or quality of the jobs obtained, whether other, more specific means should be created to meet the needs of these participants or whether one should continue the supportive interventions with the same, more or less traditional means of vocational rehabilitation for 2–3 years instead of 10–12 months. Shaw et al. (2002) point out that one should start taking more account of the individual’s perspective, especially what meaning disability has and whether returning to work is relevant to an individual.

**Into work**

The participants crossed the job threshold as intended: 62% of them were at work or in training at the end of the project, 42% a year later and 22% 2 years later. From the point of view of changes in the labour market situation, then, one can say that the project was effective. The individual paths taken to employment bear witness to the possibilities offered by flexible services for middle-aged jobless people with disabilities. In one way or another, the work-related interventions were more effective than the others: those participants who had some contact with work or the working life in the work tryout or employment phases of the project were more successful than others in finding work. The quality of employment obtained can be criticized, though: the jobs were short-term employment or subsidized placement for 6 or 12 months. Short-term or temporary employment is the usual outcome in re-employment projects, but the follow-up periods of the interventions have usually been half a year or a year (Mannila and Laisola-Nuotio, 2002). In particular, those participants who can be classified as ‘able to work but unable to find employment’ needed different interventions from those available in the project. They would probably have benefited from contacts, for example, with the transitional labour market (Mannila et al., 2001a,b), with some of the new means of re-employment such as supported employment (Saloviiita and Pirttimaa, 2000; Järvikoski, 2002), or from more intensive co-operation with enterprises, companies and workplaces (Hogelund, 1999; Baanders et al., 2001; Juvonen-Posti and Kukkonen, 2001; Mannila and Laisola-Nuotio, 2002). It is impossible to say whether the use of these newer means to supplement the traditional ones would have changed the number or quality of the jobs obtained, whether still other, more specific means should be created to meet the needs of these participants or whether one should continue the supportive interventions with the same, more or less traditional means of vocational rehabilitation for 2–3 years instead of 10–12 months. Shaw et al. (2002) point out that one should start taking more account of the individual’s perspective, especially what meaning disability has and whether returning to work is relevant to an individual.

**Retirement as a new legitimate social role**

The multidisciplinary assessment of working ability seemed to succeed well in finding and classifying the
12% of the participants who were unable to work any longer. The change of context and role from a job seeker at an employment office to a participant in a project may also have contributed to this outcome. Disabilities and special needs with regard to employment, which may have been hidden because of their negative stigma in the former context, may have turned into new possibilities, for example, through retirement, in the latter context (Järvikoski et al., 1999; Suikkanen and Linnakangas, 2000). From the individual’s perspective, early retirement is a relief, but for the working-aged person it also means losing social roles and other benefits, such as work-related learning, which may be difficult to compensate for in the social and economical role of a retired person (Mannila and Peltoniemi, 1997). Both re-employment and (early) retirement develop the life situation of the long-term unemployed person with disabilities towards greater legitimacy (Mannila and Laisola-Nuotio, 2002), so that from this perspective early retirement, too, can be regarded as a positive outcome. This raises two questions. First, when is the individual assessment of needs or working ability the right measure for planning the service process of long-term unemployed people with disabilities? Second, should such high-quality assessment be done for all disabled job seekers (Marnetoft et al., 1999; Marnetoft and Selander, 2000)?

**The need for long-term tailored training processes**

Only 11% of the men and 7% of the women who participated had inadequate basic education, but 60% of the men and 63% of the women had inadequate vocational education for re-employment. Many of the participants had skills and competences learned at work, because the mean of their work history was 17 years. All those who took the path to training finished the training but, as shown in other studies also, the new competence acquired through a training programme of 6–12 months did not help them get re-employed. There is a need for support in this phase of the process (Silvonen and Vuori, 2000). What are also needed are tailored and longer-lasting on-the-job-training processes, which should be relevant for middle-aged people with long work experience and poor vocational education and should improve their professional skills and competence so as to make them competitive in the labour market. Or should all such training be provided through the workplace, as is the case in supported employment?

**The need for multidimensional evaluation of the effectiveness of welfare projects**

The working model adopted for this project seemed to be effective, which raises the question of its wider applicability. If a health-economical type of evaluation had been done in the project, it could have given out the kind of data needed for decision making. In the economical evaluation of welfare projects, all benefits and costs should be counted and then discounted to their present value so as to be able to make comparisons between the alternatives, such as project interventions and the services used by the matched control group.

A multidimensional evaluation of the outcomes of different approaches and measures brings to light essential issues pertaining to the effectiveness of an employment programme. In the project, comparisons with the matched control group gave a clearer and totally different view of the effectiveness of the measures. The participants’ experiences further enhanced the view: there were remarkable changes at the personal level, the long-term significance of which, however, was not determined by this study (see Shaw et al., 2002). Also, the processes and mechanisms involved are poorly understood as yet. Even so, a proper multidimensional evaluation of developmental projects should be encouraged.

**Long-term co-operation, case management and innovative placement**

Marnetoft (2000) also discovered that the individual needs and the requirement for assessment of the needs for unemployed people with disabilities could be recognized better. The employment results obtained for the matched control group in this project compare quite well with the outcome of a 1996–1997 intervention programme, which was designed to assess the service needs of long-term unemployed older workers in Finland. In the 1996–1997 programme, 81% of the participants were still unemployed 1 year after the first interview and 63% after 2 years (Järvikoski et al., 1999; Rajavaara et al., 2000; Viitanen 2000a, b, c). The outcomes of this project get support from a review of recently reported outcomes of activation projects for long-term unemployed people in Finland. The main findings of the review were that at the individual level the control of life improved, that there were changes in the life situations towards work and retirement and that the outcomes and effectiveness of these reported interventions were positively influenced by partnerships at the institutional level (Mannila and Laisola-Nuotio, 2002). As to proposals for practical work in the return-to-work rehabilitation of long-term unem-
employed people with disabilities or other special needs regarding employment or work, one can point out that a combination of interventions tailored to needs and goals is needed. One effective combination is a tailored individual needs assessment, a group-support programme and case management with some kind of rehabilitation contract (Pirinen, 1995), which includes co-operation at the institutional level and contact with work. One crucial condition seems to be that the institutional setting enables a support period that is long enough from the individual’s point of view, for various results indicate that otherwise the new work careers of the most marginalized groups of unemployed people end when the social or economical support ends. It also seems that the interventions aimed at supporting the job search of long-term unemployed people with disabilities should concentrate on supporting the improvement of health resources and strengthening of the personal, social and competence resources that facilitate a participant’s job search and re-employment prospects (Silvonen and Vuori, 2000). Serving these multi-agency clients calls for multidisciplinary inter-sectoral expert work that is long-term, forceful and tailored to the client’s needs.

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The reality of returning to work and training: experiences from a long-term unemployment project

Pirjo Juvonen-Posti¹, Keijo Piirainen², Tapani Kallanranta³ and Sirkka Keinanen-Kiukaanniemi⁴

A project called Pathway-to-Work was carried out in northern Finland between 1995 and 1998. In the course of this project, tailored return-to-work paths were planned for 140 long-term unemployed people with disabilities. The present study, based on that project, had three research objectives: (i) to describe how the participants experienced and defined their opportunities of employment and training at the beginning of the project and how the opportunities were eventually realized; (ii) to form a model of the issues that influenced the participants’ decision making on the basis of their descriptions of their life situation; and (iii) to look for elements in the progression of the project that could explain the outcome in terms of the participants’ situation in the labour market. The research design was composed of three parts: eight in-depth interviews, a register follow-up, and comparison with a matched control group. Comparative content analysis was used to process the in-depth interviews. The outcome was evaluated according to the following variables: (i) the changes in the participants’ labour market situation during the 2-year follow-up; (ii) the changes in the participants’ distress level, perceived competence, and sense of coherence during the intervention. We found that the participants had not decided whether to return to work but had left this decision to the professional working on the project. The way participants described their life situations and opportunities made it clear that they placed high expectations on the project. However, although they could realistically estimate their own potential, the labour-market situation was beyond their predictive vision. We conclude that, when targeting services to groups such as described here, more attention should be paid to understanding the clients’ behaviour and the social circumstances in which they live.


Entre 1995 y 1998 se llevó a cabo en el norte de Finlandia un proyecto de Reinserción Laboral, consistente en la programación personalizada de la reinserción laboral de 140 desempleados de larga duración con discapacidades. El presente estudio, basado en dicho proyecto, tuvo tres objetivos: (i) describir cómo percibían y describían los participantes sus oportunidades de empleo y formación al inicio del proyecto y cómo las aprovechaban realmente; (ii) crear un modelo de los factores que influyeron en la decisión tomada por los participantes sobre la base de las descripciones de su situación vital; y (iii) buscar elementos en la progresión del proyecto que pudieran explicar el resultado en términos de la situación laboral de los participantes. El diseño de la investigación distinguía tres partes: ocho entrevistas en profundidad, un seguimiento del registro, y comparación con un grupo de controles emparejados. Se realizó un análisis comparativo del contenido para procesar las entrevistas en profundidad. El resultado se evaluó de acuerdo con las siguientes variables: (i) cambios en la situación laboral de los
participants durante los dos años de seguimiento; (ii) cambios en el nivel de angustia de los participantes, en la competencia percibida y en la sensación de coherencia durante la intervención. Observamos que los participantes no eran los que decidían su reinserción laboral, sino que dejaban esta decisión en manos del profesional que trabajaba en el proyecto. Por la forma en que los participantes describieron su situación vital y sus oportunidades, estaba claro que tenían grandes expectativas depositadas en el proyecto. Sin embargo, aunque eran capaces de realizar una estimación realista de su potencial personal, su visión predictiva no alcanzaba la situación del mercado laboral. Nuestra conclusión es que, cuando se ofrecen servicios a grupos como el que se describe aquí, debe prestarse más atención a conocer la conducta y las circunstancias sociales de sus destinatarios.

Un projet intitulé Pathway-to-Work ("sur la voie du travail") a été mené à bien dans le nord de la Finlande entre 1995 et 1998. Dans le cadre de ce projet, des "voies de retour au travail" ont été conçues sur mesure pour 140 chômeurs de longue durée présentant des infirmités. La présente étude, qui s’appuie sur ce projet, a eu trois objectifs de recherche : (i) décrire comment les participants ont ressenti et défini les possibilités de travail et de formation qui leur ont été offertes au début du projet et comment ces possibilités se sont finalement concrétisées ; (ii) former un modèle des sujets qui ont influé sur la prise de décision des participants sur la base de leur description de leur situation personnelle ; (iii) trouver des éléments dans la progression du projet susceptibles d’expliquer le résultat en se considérant sous l’angle de la situation des participants sur le marché du travail. Le plan d'étude comportait trois parties : huit entretiens approfondis, un suivi du registre et la comparaison avec un groupe de contrôle apparié. Une analyse de contenu comparative a été réalisée pour traiter les entretiens approfondis. Les résultats obtenus ont été évalués en fonction des variables suivantes : (i) l'évolution de la situation des participants sur le marché du travail pendant les 2 années de suivi ; (ii) l'évolution du degré de souffrance des participants, des compétences perçues et de leurs sens de la cohérence pendant l'intervention. Nous avons découvert que les participants n'avaient pas décidé de reprendre ou non le travail mais avaient laissé la décision aux professionnels qui travaillaient sur le projet. La façon dont les participants ont décrit leur situation personnelle et les possibilités qui se présentaient à eux indiquait clairement qu'ils avaient placé de grands espoirs dans le projet. Toutefois, s'ils étaient capables d’estimer de manière réaliste leur propre potentiel, leur situation sur le marché du travail était au-delà de leur vision proactive. Pour conclure, lorsque des services s’adressent à des groupes cibles, comme c’était le cas ici, une attention particulière doit être accordée à la compréhension du comportement des clients et des conditions sociales dans lesquelles ils vivent.

Introduction
The main focus of this article is the multidimensional evaluation of the effectiveness of an employment programme with particular reference to the participants’ experiences. This is the second article that deals with data from the Pathway-to-Work Project (Juvonen-Posti et al., 2002), a rehabilitation and re-employment project carried out between 1995 and 1998 in North Ostrobothnia, Finland. The project had 140 participants, who formed a representative sample of the region’s heterogeneous population of long-term unemployed people with disabilities. All the participants were long-term unemployed, middle-aged people with various disabilities or diseases; most of them had a poor vocational–educational background. Although not all were classified as disabled job-seekers at the employment agency before the project, as a group the participants belonged to those unemployed people whose chances of employment were among the worst in Finland (Mannila and Peltoniemi, 1997; Hämäläinen, 1999; Mannila 2002a; Suikkanen and Linnakangas, 2000).

The most significant outcome of the project was a break in the long periods of unemployment. At the end of the project, the labour market standing of 84% of the participants was something other than unemployment. A year later, the figure was 59% and 2 years later 38%. Thus, for 46% of the participants the break in the unemployment was temporary.

The nationally set goal for the so-called ‘path projects’ in Finland, funded by the European Social Fund (ESF) Objective 3 during the years 1995–1999, was to get at least 40% of the participants employed. By the time they ended, these projects had exceeded their goal and had got 48% of their participants into work (Hummaisti, 2002).
With 48% of the participants in work at its end, the Pathway-to-Work Project was one of those that exceeded the goal. However, the 2-year follow-up showed that this outcome was temporary: 1 year later 36% were at work and 2 years later only 14% of participants were working. It must be noted, though, that there were wide variations in the paths the individual participants took during the project and in the 2-year follow-up.

The rehabilitation and return-to-work intervention carried out during the project improved the participants’ psychosocial quality of life. Their distress level (measured with the General Health Questionnaire-12; GHQ-12), decreased and there was some improvement in their perceived competence (measured with Wallston’s Self-Performance Survey; WSPS). The participants’ raised level of activation could be seen, for example, in the quality and quantity of the activities they entered during the project.

Comparison with the matched controls made it clear that the project created functional client–service processes through intersectional practices with the rehabilitation unit of a central hospital and a local employment agency (as the co-operative parties). The practices adopted in the project were shaped by the cultures and the customary courses of action of the co-operating organizations. For example, there was more co-operation with public-sector workplaces than private-sector ones, and the co-operation with the workplaces took more formal ways than in some other projects (Mannila, 2002a).

**The purpose of the study**

The purpose of the present study was threefold, and is best described in terms of the following three research objectives: (i) to describe how long-term unemployed people with disabilities defined their opportunities of employment and training when they entered the project and how the different opportunities offered by the project were realized during the follow-up period; (ii) to compose, from the participants’ descriptions of their life situations, a model of the issues that influenced their analysis of their own situation and their decisions about entering work or training; and (iii) to see whether factors in the rehabilitation process could be found to explain the outcome in terms of the participants’ situation in the labour market labour at the end of the 2-year follow-up period.

**Data, material and methods**

**The participants and the quantitative methods**

The main variables used in the quantitative analysis were described in detail in the article by Juvonen-Posti et al. (2002). These were: (i) changes in the participants’ distress level, measured with the GHQ-12; (ii) the participants’ perceived competence, measured with WSPS; (iii) their sense of coherence, measured with Antonovsky’s SOC (ASOC-13); and (iv) changes in the participants’ situation in the labour market, measured with the questionnaires and the 2-year register follow-up.

A total of 140 people were selected to be participants in the study, and another 140 people were chosen to be matched controls; the matching was found to be satisfactory. The average of the participants was 44 years and 41% were female. The mean number of diagnoses was 5.3 (see Table 4) and, according to a physician, the main diagnoses were psychiatric diseases, musculoskeletal disorders, asthma and other lung disorders, and other problems related to unemployment, in that order of frequency. At the start of the project, the participants’ own estimation of their health on a visual analogue scale (VAS) was 5.5, and that of their working ability 5.9, i.e., poor (see Table 4). However, the outcome when estimating their ability to work by questionnaire was contradictory: participants were more able to work than predicted according to the self-estimation by VAS (see Table 4). Their distress level (GHQ-12) averaged 4.26, i.e., high, their perceived competence (WSPS) was 33.7, and their sense of coherence (ASOC-13) was 45.34 (all the figures are averages). Sixty per cent of participants had poor vocational–educational backgrounds but they had an average 18-year work history. They had been uninterruptedly unemployed for an average of 3 years and 3 months before the project. The participants were divided into four subgroups according to where their paths ended at the conclusion of the project: work (subgroup 1), training (subgroup 2), work try-out (subgroup 3), or assessment of working ability (subgroup 4) (Table 1). However, subgroup 4 was excluded from the examination of the participants’ psychosocial quality of life and situation in the labour market because of small number of participants.

The statistical methods used here were the same as in the earlier study (Juvonen-Posti et al., 2002) except that, when calculating the statistical significance of the continuous variables of ASOC-13, GHQ-12 and WSPS, only two groups were compared in Table 5 and Figures 3, 4, and 5; in these instances the Kruskal–Wallis one-way test was used.

**The qualitative method**

The qualitative design involved eight in-depth interviews. These were conducted at the end of 1995 and the beginning of 1996. Four of the interviewees had entered the project among the first 30 participants at the end of 1995. The other four were among the next 30 participants, who started the project at the beginning of 1996. Three of the eight interviewees were from subgroup 1, i.e., their paths ended in going to work during the project; the other five were from subgroup 2, i.e. their paths ended in training (see Table 1).
The client service process started with each client being interviewed by a rehabilitation counsellor. In the interview the clients were informed about the ongoing research project. Afterwards, those clients who wanted to volunteer as participants in the research contacted the rehabilitation counsellor to sign up for a research interview and the counsellor then informed the researcher about the volunteers. The criterion for including a participant was simply that s/he had decided to join the project. There were no exclusion criteria.

Eight audio-taped research interviews were conducted as planned—every time by the same researcher—between November 1995 and March 1996 at the place of the participant’s choice. The interviews were 1½–2 hours in length. They were semi-structured, comprising the themes presented in Table 2, and focused on the participants’ life-history descriptions (e.g., descriptions of their early childhood, their marital life, their relations with their parents and children, their hobbies, their reasons for entering the project) and the actual circumstances of their lives.

The taped interviews were transcribed verbatim by a research assistant. In the first phase of the analysis, the background data of the eight participants were extracted and analysed quantitatively, after which their individual paths were retracted. The first author then read through the data, re-composed the individuals’ training history, work history and descriptions of their life courses and diseases and/or disabilities into separate documents, and then compared the background data and the follow-up data with these documents (Patton, 1990; 1997; Seale, 1999).

In the second phase of the analysis, the second author interpreted the data by means of the constant comparative method (Patton, 1990; 1997). The focus of the comparison was on the issues arising most explicitly from the data. The emergent themes were recorded onto the transcripts by hand. The themes were then summarized into categories, on the basis of which the model was created. The content analysis rested on the confidence in the expression of the individual’s opinion.

In the third phase, the first author re-read the data to condense it and to compare the analysed quantitative data with the themes discovered.

The interviewees spoke the common dialect of the region of Northern Ostrobothnia, which is quite comprehensible to speakers of other Finnish dialects, although it contains idioms, phrases and words not used elsewhere. For authenticity, the dialect was retained in the transcription. In translating the illustrative extracts quoted in the Results section below, the translator stayed close to standard English but aimed for an informal speech-like form. An example will clarify the approach:

Haastatteluja: ‘Miten näkisit omat työllistymismahdollisuutesi tällä hetkellä?’


Translation:

Interviewer: ‘How do you see your chances of getting employed at the moment?’

E (male): ‘Pretty poor…My health, can’t seem to find out how it is…First I need to find out about this here, I’ve had an arm operation. Is it gonna be OK at work, and is my blood pressure gonna keep in check. I’d still like to work, you know, like interior painting, but at my own pace. No contract teams for me anymore, I can’t take the pressure.’
Triangulation
For a deeper understanding of the phenomena investigated, we made systematic use of triangulation in this study: data, investigator, and methodology triangulation. Both qualitative and quantitative data were used, particularly in the analysis of the participants’ life situations and the changes therein. We combined the content analysis of the interviews with the participants’ background data and with the information we obtained from the questionnaires and the register follow-up regarding the processes they had undergone. In our analysis of the changes occurring in the paths, the quantitative data was also partially analysed qualitatively (Patton, 1990; Seale, 1999).

Results
Relations between the participants’ expectations of employment and training and their life situations after the project
The eight interviewed participants belonged to subgroups 1 and 2 (see Table 1), which together comprised 82% of the 140 participants. Those belonging to subgroup 1 represented the paths taken by 63% of all the participants in that subgroup, and those in subgroup 2 represented the paths taken by 92% of all the participants in that subgroup. They were a little older, had been working longer and had been unemployed a little less than the average of the whole participant group, and two of eight were women (Table 3). Their self-estimations of their health and working ability were lower, and their estimates of the frequency of their different diseases were higher (Table 4), than the average of the whole participant group.

The relationships between the expectations and changes were analysed through case stories. The participants’ case stories were combined from their interview data and from their background and follow-up data (see Tables 3 and 4, and Figure 1). In the following four cases, the participant found employment for at least some time during the follow-up period:

Case A: a 47-year-old woman whose health complaints were dizziness, defective hearing and shoulder pains and who, during the interview, was ambivalent about returning to work. During the project she found employment and worked for a year, after which she was unemployed again (see Fig. 1). Although the short and temporary period of employment and the subsequent unemployment seemed foreseeable with hindsight, they were not predictable beforehand.

A (female): ‘…if they could get me into better health, then, well, I don’t know [about going to work]. I could even work then. But now, that arm of mine has been, it’s in pain every day.’

| Table 3 The employment history profile of the eight interviewed participants |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Participant | Gender | Age (years) | Length of work history (years) | Occupation | Type of last job | Duration of unemployment (months) in the last 5 years |
| A | Female | 47 | 12 | White-collar | Temporary | 37 |
| B | Male | 42 | 16 | Blue-collar | Permanent | 29 |
| C | Female | 43 | 25 | Entrepreneur | Entrepreneur | 15 |
| D | Male | 45 | 20 | Blue-collar | Temporary | 46 |
| E | Male | 45 | 30 | Blue-collar | Temporary | 46 |
| F | Male | 41 | 15 | Blue-collar | Temporary | 54 |
| G | Male | 50 | 28 | White-collar | Permanent | 38 |
| H | Male | 44 | 19 | Blue-collar | Permanent | 26 |
| Mean | – | 44.6 | 20.6 | – | – | 36 |
| *The mean of the 140 participants | – | 44 | 18 | – | – | 39 |

*From Juvonen-Posti et al., 2002, Tables 2 and 3.

| Table 4 The health and working ability profile of the eight interviewed participants |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Participant | Self-estimation of health (VAS*) | Self-estimation of working ability (VAS*) | Self-estimation of the frequency of different diseases | Self-estimation of working ability |
| A | 4.64 | 5.2 | 7 | Able to work |
| B | 4.64 | 3.4 | 18 | Able to work with adjustments |
| C | 4.64 | 4.7 | 1 | Able to work with adjustments |
| D | 4.56 | 4.0 | 9 | Unable to work |
| E | 5.84 | 5.2 | 4 | Able to work with adjustments |
| F | – | – | 0 | – |
| G | 3.28 | 3.1 | 7 | Unable to work |
| H | 1.04 | 2.1 | 12 | Unable to work |
| Mean | 4.09 | 3.96 | 7.3 | – |

*VAS, visual analogue scale (0–10).
**From Juvonen-Posti et al., 2002, Tables 2 and 3.
Case B: unlike case A, the life situation of this 42-year-old man, who was also ambivalent towards his situation, developed so that he was employed for the whole 2-year follow-up period after the project (see Fig. 1). He described his health problems as ‘farmer’s lung’, rash, migraine and bellyache.

B (male): ‘When they asked me what plans I have for the future, well I told them you can’t make any plans with what information I’ve got… I’m interested in getting some [information] about do I really have that working capacity or not, why you’d think, just by horse sense, that if you only manage a couple of hours’ work at a time and then need to rest an hour, then nobody’s got any use for that sort of worker, never has.’

Case C: this 43-year-old woman with back pain problems entered training after being employed for 6 months (see Fig. 1). She kept all her options open during the project, emphasising return to work, entering training, and retirement equally at the interview. The possibility of retirement came up mainly because she thought her employment options were slim. After the project she reached her goal for employment and training (see Fig. 1).
C (female): ‘I think in my case it’s because they’re sort of seeing if I’m any good for any [work] anymore…I could do three-shift work, any kind, but I don’t want to go far from this neighbourhood to work…Why don’t they put me on retirement, for I’m not going to get a job on account of my age. And one thing’s for sure, if you’ve got any illness…you’re not going to get that job. These days you’ve got to be healthy, of your back especially…I started to think, just the other day it was, that since I can’t get a job anyway, I suppose I might as well go study something.’

Case D: an overweight 45-year-old man who reported high blood pressure, knee pains, and poor physical fitness as his health problems. He regarded his possibilities of returning to work as tough, yet returning to work was the only option he brought up at the interview; he was not interested in training at all. He took part in the 6-week training and rehabilitation course organised by the project and in vocational training after that (see Fig. 1). He found employment at the end of the project and then worked for the whole follow-up period (see Fig. 1). Although he claimed that better health was one of the main preconditions for his getting a job, his health problems turned out not to be an obstacle.

D (male): ‘I have this overweight, and I’m in bad shape physically. So I have maybe also thought that…And besides, I’ll bet if you’re 46 and starting to be…I will choose the 30-year-old any day. He’s slimmer and trimmer and quicker and all that.’

The other four interviewed participants did not find employment at any stage of the project, although their goals for the project and their life situations did not differ from the ones of those who found employment:

Case E: a 45-year-old man with mental health and arm pain problems who highlighted his need for clarity on his health status but kept all his options open, too. Besides health issues, he also pointed out the need of adjustments in his work.

Interviewer: ‘How do you see your chances of getting employed at the moment?’

E (male): ‘Pretty poor…My health, can’t seem to find out how it is…First I need to find out about this here, I’ve had an arm operation. Is it gonna be OK at work, and is my blood pressure gonna keep in check. I’d still like to work, you know, like interior painting, but at my own pace. No contract teams for me anymore, I can’t take the pressure.’

At the interview he brought up the possibilities of training, which he thought were not many. Even so, he was in training for a year and unemployed after that (see Fig. 1).

Interviewer: ‘Do you think you’re beginning to be a bit too old for training?’

E (male): ‘When you observe this market economy that’s running wild in Finland, yes I do…If my health status is found to be good enough that I can work, then I’ll go looking for work like crazy. But if there are restrictions, and I mean occupational restrictions, then I’ll have to seek training or quit the occupation altogether.’

Case F: this 41-year-old man with abuse problems and overweight estimated his chances of employment to be slim, however, he was highly motivated to go into training. After 1 year in training he was unemployed (see Fig. 1).

F (male): ‘I’m going to a technical institute if I get in…from what I’ve been leafing through here, they seem pretty simple.

Case G: this 50-year-old man who had had a stroke and had high blood pressure and diabetes as his health problems estimated that his chances of employment, training or retirement were slim. After a year in training he was unemployed (see Fig. 1).

Interviewer: ‘Would it be better if some retirement scheme could be worked out?’

G (male): ‘Well, on the one hand it would be better, but on the other hand it’s not…Basically I’m quite ready to go [into training], but it’s questionable whether it makes any sense. I mean it’s seven to eight years. I’ll be an old man of 59. That makes it questionable. Because it was sort of, like a service manager’s post that I got laid off from, so of course I will, if I get a study place that is, I will head upwards from there, go for the next step so to say…And then there’s also another problem, there has been no assessment of my learning capacity…I mean my learning capacity may be…weak. And that again affects my patience.’

Case H: this 44-year-old man with mental health, abuse and asthma problems went on sick leave during the project (see Fig. 1). He had had some bad experiences, which could be seen as a vicious circle of misfortune. From this point of view his sick leave was foreseeable. His thoughts about returning to work or entering training were the same as those from participants who found employment.
H (male): ‘You see, it’s like if you’re not at school and not in the working life, you soon start wondering if you are good for anything anymore... So, I told them at the employment office, I said couldn’t I still take those tests, to sort of see what I might be good for... I had this dream, you know, to get to masseur training. But there were no possibilities at the time, no training places supported by the employment office or the Pensions Institute. Now I hope to get some impetus, some idea whether I might be good for that, or whether I have to continue in electronics... What I hope most of all is some feedback that I might be good for this massaging work... I don’t want to go [to vocational school]. There must be over half the people over thirty at least before I go, so it’s out of the question.’

Interviewer: ‘So you’re not hoping for a situation at the end of the project where we’d be seeking a retirement scheme?’

H (male): ‘Oh no, no way. Nothing like that, I don’t want to retire this young. I have in principle, you know, I should still have twenty years, almost, of good working time left.’

The most common diagnosis among all 140 participants was psychiatric disease (33/140), 42% of which were because of alcohol abuse; these occurred in all the subgroups (see Table 1). Neither the participants’ actual life situations during the project nor their own analyses provided us with any basis for estimating the changes that took place in the 2-year follow-up period. We were unable, then, to predict whether their life courses would lead to employment, training, sick leave or retirement, or to an alternation of these life situations during the follow-up period.

The reality of returning to work and entering training

Experiences of disability

The participants did not discuss their experiences of disability as intensively as we had expected. Instead, they described in detail the obstacles their disabilities caused at work and the need for practical adjustments at work.

F (male): ‘This fatness alone sets certain restrictions as regards working life. You don’t anymore, with the pace getting quicker and quicker, you don’t get up on that roof with a pouch like this one and move about weasel-like. No, you’ve got to be in shape to go up there these days. My occupational skills are there, but I step slower.’

When goals concerning the return to work or training came up at all, they were mentioned with strong reservations on health and working ability grounds.

C (female): ‘Yeah, I’d like to talk to a doctor, face to face if I could, about my back, to find out what the situation really is.’

The participants felt that they did not have enough information about their working ability.

Interviewer: ‘How do you see your chances of getting employed at the moment?’

E (male): ‘Poor.’

Interviewer: ‘Why?’

E (male): ‘My health, I just don’t seem to have enough information about it.’

The relevance of returning to work or training

At the time the participants entered the project, their life situations were marked by uncertainty: there was uncertainty as to whether or when they might get to work or training, and there was no improvement in sight. At the beginning of the project they were unable to form a clear picture of their possibilities, and they were hoping that the project would define their opportunities for employment, training and retirement and help them take action towards realising those opportunities. One crucial outcome of this research is that at the beginning of the project the participants did not actively define their new possibilities from their own standpoints in any detail. Instead, they yielded the responsibility and power to interpret their own life situations as regards the issues of employment, training or retirement to the project and its professionals. The participants explained the giving up of their power in these matters by referring to their lack of information on their working ability (see Table 4). Another crucial outcome is that the participants estimated their long-term chances of employment and training very realistically. This outcome was probably affected by their long periods of unemployment with experiences of employment in between.

G (male): ‘And for those jobs I’ve applied for, I’ve made it as far as the interview. There are no problems until then. The problem always comes when we start talking about these nine years. There you have to tell them, you know, that you’ve had a blood clot on the brain and that you have diabetes and high blood pressure, for you can’t hold back these things.’

Expectations of the project

At the beginning of the project the participants—long-term unemployed people with disabilities—were undecided about entering work or training. They expected the project to answer these multidimensional questions for them.
The issues that the participants seemed to take into consideration when analysing their own situations are presented schematically in Figure 2. The main issue was the relevance of returning to work or entering training. When reflecting on this issue the participants judged it against their experiences of unemployment and their efforts to re-integrate into working life. Another influential issue was their perception of their disability and the personal meaning they attached to it. This issue was reflected on against their experiences of being ill and getting better and against their chances of employment. In this connection they brought up the attitudes of employers towards middle-aged people with disabilities. Among these two main issues they discussed their expectations of the project.

Changes in psychosocial quality of life and labour market situation in the subgroups during the 2-year follow-up

The changes in the distress level, perceived competence, and sense of coherence indicated a better psychosocial quality of life of those participants whose paths ended in work during the project (subgroup 1). This became evident when compared with the mean values of the whole group and each of the other two subgroups (Table 5, Figures 3, 4, and 5). The difference is particularly clear in perceived competence, where the trend in subgroup 1 was increasing whereas in the other two subgroups it was decreasing. According to the means of the GHQ-12, WSPS, and ASOC-13, those participants whose paths ended in work or work try-out benefited more from the project than the participants whose paths ended in training. The psychosocial quality of life of those participants whose paths ended in training (subgroup 2) showed a higher and slightly increasing level of distress. Perceived competence was also poorer and decreasing, and sense of coherence was poorer in this subgroup than the mean of all participants (Figures 3, 4, and 5; Juvonen-Posti et al., 2002).

The participants’ situations in the labour market also changed during the closing phase of their project (Juvonen-Posti et al., 2002; see Table 1). In 52–70% of the cases they ended up in unemployment, which was the most frequent outcome in all subgroups. As an example, the changes in subgroup 2 are shown in Fig. 6. In subgroup 1, 24% were employed at the end of the 2-year follow-up period, as opposed to 6–10% in subgroups 2 and 3. In subgroup 2 (Figure 6) the participants were either unemployed (52%) or, more often than in other two subgroups, on sick leave or retired (27%). Of those participants whose paths ended in work try-out, 70% were unemployed and 15% on sick leave or retired 2 years after the project.

The labour market situations of the participants showed many unpredictable changes, both qualitative and quantitative. Most of these sporadic changes took place in subgroup 2, i.e., those participants whose paths ended in training (Fig. 6). We found that the members of this subgroup could be divided into three subsections by the beginning of the 2-year register-follow-up. One subsection continued in training for 1 year, another was on sick leave (and most of these participants stayed on sick leave or retired during the 2-year follow-up), and the 10 participants in the third subsection were unemployed at the end of the project and most of them stayed unemployed for the 2-year follow-up period. The variation in life situations between the subgroups might have allowed us to make some predictions about the subgroups’ outcomes. Predictions of individual participants’ outcomes cannot be made because the changes were so sporadic.

**Discussion**

**Realistic attempts at estimating the unpredictable and the temporary?**

The participants had not decided whether to return to work; they left this decision to the professionals on the project. The participants brought up the relevance of entering training as a new possibility. The personal

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**Fig. 2**

![A model of the issues influencing the participants' own analysis and decision making about entering work or training.](image-url)
meaning that the participants attached to disability came out weakly. Their interpretation of the special needs that had to be met for their returning to work was also hard to make out. The long period of unemployment ended for half of the interviewed participants, whereas there was only a temporary break of 6 to 12 months in the unemployment of the other half. Four of the participants met the main expectation of the all interviewed participants—was clarity over their life situations.

Table 5 The mean levels of distress as indicated by the General Health Questionnaire (GHQ-12), perceived competence as indicated by Wallston’s Self-Performance Survey (WSPS) and sense of coherence as indicated by Antonovky’s SOC-13 (ASOC-13) over time in subgroups 1 to 3 and the significance of the differences among the subgroups

<table>
<thead>
<tr>
<th></th>
<th>Subgroup 1 (paths to work) n=63</th>
<th>Subgroup 2 (paths to training) n=52</th>
<th>Subgroup 3 (paths to work-try-out) n=20</th>
<th>Significance of the differences among the subgroups</th>
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</thead>
<tbody>
<tr>
<td>Distress</td>
<td>GHQ-12 mean at thebeginning (A)</td>
<td>GHQ-12 mean at thebeginning (A)</td>
<td>GHQ-12 mean at thebeginning (A)</td>
<td>p²</td>
</tr>
<tr>
<td></td>
<td>59/2.68</td>
<td>47/4.87</td>
<td>20/6.10</td>
<td>0.004</td>
</tr>
<tr>
<td>After 6 months (B)</td>
<td>57/1.25</td>
<td>40/3.55</td>
<td>17/2.88</td>
<td>0.045</td>
</tr>
<tr>
<td>At the end of the project (C)</td>
<td>56/1.16</td>
<td>39/3.80</td>
<td>18/3.06</td>
<td>0.005</td>
</tr>
<tr>
<td>The change</td>
<td>B–A</td>
<td>53/–1.55</td>
<td>36/–1.08</td>
<td>0.213</td>
</tr>
<tr>
<td></td>
<td>C–B</td>
<td>53/0.02</td>
<td>35/0.51</td>
<td>0.400</td>
</tr>
<tr>
<td></td>
<td>C–A</td>
<td>52/–1.54</td>
<td>36/–0.64</td>
<td>0.367</td>
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<td>Perceived competence</td>
<td>WSPS mean</td>
<td>WSPS mean</td>
<td>WSPS mean</td>
<td>p²</td>
</tr>
<tr>
<td></td>
<td>At the beginning (A)</td>
<td>57/35.19</td>
<td>47/32.62</td>
<td>0.117</td>
</tr>
<tr>
<td></td>
<td>After 6 months (B)</td>
<td>56/36.02</td>
<td>39/32.87</td>
<td>0.202</td>
</tr>
<tr>
<td></td>
<td>At the end of the project (C)</td>
<td>57/37.72</td>
<td>38/32.26</td>
<td>0.006</td>
</tr>
<tr>
<td>The change</td>
<td>B–A</td>
<td>51/1.37</td>
<td>35/0.29</td>
<td>0.826</td>
</tr>
<tr>
<td></td>
<td>C–B</td>
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<td>35/–0.46</td>
<td>0.728</td>
</tr>
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<td></td>
<td>C–A</td>
<td>52/2.80</td>
<td>35/0.17</td>
<td>0.889</td>
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<td>Sense of coherence</td>
<td>ASOC-13 mean</td>
<td>ASOC-13 mean</td>
<td>ASOC-13 mean</td>
<td>p²</td>
</tr>
<tr>
<td></td>
<td>At the beginning (A)</td>
<td>56/65.52</td>
<td>44/56.93</td>
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<td></td>
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<td>38/56.82</td>
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</tr>
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<td>The change</td>
<td>C–A</td>
<td>49/2.57</td>
<td>33/–0.21</td>
<td>0.912</td>
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</tbody>
</table>

Fig. 3 The means and the changes of the means over time in distress by the mean of the General Health Questionnaire (GHQ-12) in the participant subgroups.

Fig. 4 The means and the changes of the means over time in perceived competence by the mean of Wallston’s Self-Performance Survey (WSPS) in the participant subgroups.
Distress subgroups 1 to 3 and the significance of the differences among the subgroups. The means and the changes of the means over time in distress by the participant GHQ-12 mean of the General Health Questionnaire (GHQ-12) in the participant subgroup.

Fig. 3

The change of Sense of coherence by the mean of the GHQ-12 in the participant subgroup. The means and the changes of the means over time in distress by the participant GHQ-12 mean of the General Health Questionnaire (GHQ-12) in the participant subgroup.

Arguments for and against returning to work

The participants' expectations of the project carried a great deal of weight in their considerations of their opportunities. They brought up a variety of arguments for and against returning to work. We believe that the model we devised (see Fig. 2) can be generalized beyond this project in the sense that it helps in understanding the life circumstances of clients in similar projects or even other rehabilitation or re-employment services. Beyond this, however, one should be cautious about generalizing the model.

Unpredictable labour-market situations

Although the participants estimated their employment and training opportunities very realistically at the beginning of the project, no estimates of their situation in the labour market could be made on this basis. It is also hard to make any obvious predictions either from the changes in their psychosocial quality of life or from the number and kind of changes in their labour-market situations during the closing phase of the project and the follow-up period. Coping with these processes poses a challenge to the flexibility of the service system.

The changes in subgroup 2 indicated that the participants did not get enough support during their training processes. The vocational education and competence for re-employment of most of the participants were inadequate. Despite finishing their training as planned, they were not employed during the 2-year follow-up period. (Juvonen-Posti et al., 2002) This outcome underlines the need for support in this phase of the process (Silveno and Vuo, 2000).

Conclusion

How successful was the research design?

The selection of participants to be interviewed was systematic, as planned, but was done on a voluntary basis, i.e., non-randomly, and all those selected were from subgroups 1 and 2. Although the interviewed participants represented the whole group of participants quite well, there were differences whose effects are not known. The lack of follow-up interviews and, as mentioned earlier, the lack of follow-up data on the matched control group (Juvonen-Posti et al., 2002), weaken our analysis of the mechanism (Pawson and Tilley, 1997). The degree of success of the quasi-experimental part was discussed in detail earlier (Juvonen-Posti et al., 2002).

The importance of social context for understanding the participants' behaviour

The participants' estimates of the unpredictable and the temporary, and of their arguments for and against returning to work, can be explained in the following ways:

The participants had been unemployed for a long time, they had first-hand experience of the impact of their health status and age on employment, and they knew the labour-market situation in their region. They had adjusted their life, more or less successfully, to live on a low income. Despite the economic pressures for change, it seemed hard to them, on their own at least, to find practical solutions for their complicated life situation (Söikkeli, 2000).

During their prolonged period of unemployment, participants gained considerable experience of different training and employment efforts, so that at the beginning of the project they did not want to seem too eager or to risk failure. People experience unemployment and its significance for their lives differently, and their ways of coping with unemployment also vary (Hänninen, 1996).

In addition to long-term unemployment, an above average number of participants suffered from mental health problems (Mannila and Peltoniemi, 1997; Clausen, 1999).

Whichever explanation is adopted, the main point is that authorities and experts in rehabilitation need to give more consideration to understanding people's behaviour, and must also become familiar with the social and cultural context of participants' everyday lives, when working with and implementing service models for unemployed people with disabilities (Vilkkumaa, 1997; Shaw et al., 2002).

Transferring the knowledge of tailoring to regional networks?

In Finland, integration into working life is difficult for those over 45 years of age; it is especially difficult for
those over 55 and for those with a poor educational background (Mannila and Peltoniemi, 1997; Suikkanen and Linnakangas, 2000) and ill health or disabilities (Hämäläinen, 1999). When planning rehabilitation and employment activities for people with reduced chances of entering work, we were unable to find any subgroups whose return to work we could predict better than others'. Neither could we predict individuals' returning to work or entering training on the basis of their individual characteristics, expectations or estimations.

Rather than discussing which long-term unemployed people with disabilities benefit most from rehabilitation and re-employment, those in charge of the service decision-making should prioritise tailored, systematically conducted assessments of people's needs for vocational rehabilitation and re-employment. Proper long-term planning and support of the individuals during the process—carried out at the institutional level as well as co-operatively with the unemployed individual—is also needed (Marnetoft et al., 1997, Claussen, 1999). Different long-term unemployed individuals need different services tailored specifically for them (Mannila, 2002b).

To improve the outcome of rehabilitation, it is necessary to take a closer look at: (i) understanding individuals' return-to-work behaviours and the reasons for these behaviours (Shaw et al., 2002); (ii) the quality of the counselling process (Lustig et al., 2002); (iii) enhancing the tailoring process by identifying indicators for recognizing individuals who have a greater need for support (Millet and Sandberg, 2003); (iv) the work and workplace-related determinants (Janssen et al., 2003, Storey, 2003); and (v) how to improve co-operation between the agencies (Mannila and Laisola-Nuotio, 2002) and especially with employers (Robinson, 2000; Westmorland and Williams, 2002; Kukkonen, 2003).

The lessons learned in this project could be mainstreamed into routine intersectoral co-operative practices at the regional level. The Finnish government has introduced a new strategy for reducing structural unemployment, one of the main means of which is to reform employment services according to customer needs (Finland's National Action Plan for Employment, 2003). This means mainstreaming the experiences from the intersectoral service-network project (Spangar et al., 2002).

The changes of the labour market situation of the participants, whose pathways ended to training during the project (the subgroup 2, $n=52$).

---

**Fig. 6**

<table>
<thead>
<tr>
<th>At work</th>
<th>In training</th>
<th>On sick leave or retired</th>
<th>Unemployment</th>
<th>Other or not known</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of the project</td>
<td>Register follow-up after 6 months</td>
<td>Register follow-up after 12 months</td>
<td>Register follow-up after 24 months</td>
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</tbody>
</table>

The changes of the labour market situation of the participants, whose pathways ended to training during the project (the subgroup 2, $n=52$).
2003), the aim of which was to create ‘one-stop shops’ for multi-agency clients (Karjalainen, 1996). For a successful start in forming services on these new regional networks, it is important that the regional information accumulated in different development projects about combining the individual and system centric approaches are taken into account.

Acknowledgements

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References


Viime vuosina tehdyissä rakenteellisissä uudistuksissa keskeisenä työikäisen väestön työurien jatkamisratkaisuna on ollut työpaikan eri toimijoiden ja työterveyshuollon työkyvyn tukeen liittyvän yhteistyön tiivistäminen (Sosiaali- ja terveysministeriö 2011). Työpaikoilla työkyvyn tuen on perustuttava yhteistyössä laadittuun toimintamalliin (sairausvakuutuslain muutos 1056/2010), ja pitkittyvään tapauskohtaiseen työkyvyttömyyteen on puututtava yhteistyössä (sairausvakuutuslain muutos 19/2012 ja työterveyshuoltolain muutos 20/2012). Työterveys- yhteistyöllä tarkoitetaan työnantajan ja työntekijöiden tai heidän edustajiensa sekä työterveyshuollon suunnitelmallista ja tavoitteellista yhteistyötä työterveyshuollolain toteuttamiseksi (Valtioneuvoston asetus... 2013). Tässä artikkelissa nojataan eri toimijoiden normipeusteejään yhteistyömääritteleyyn.


Työntekijän työkyvyn ja työssä selviämisen seuranta ja tuken minen, kuntoutustarpeen tunnistus ja kuntoutukseen ohjaus

Työterveysyhteistyö työpaikan kanssa terveys, turvallisuus ja työkykyasioissa

Verkostoyhteistyö ja koordinaatio terveydenhuollon ja kuntoutuksen kanssa työntekijän työkyvyn tuki prosessissa

Työuralla jatkamista tukeva yksilöllinen työkyvyn tuki

Kuva 1. Työterveyshuollon tehtävät yksilöllisessä työkyvyn tukeessa.
Tässä artikkelissa tarkastellaan sitä, miten Kelan työhönkuntoutuksen kehittämis- hankkeen toisen vaiheen eli TK2-hankkeen (2012–2014) kuntoutus toimi suhteessa mu- kana olleiden organisaatioiden työkykyjohtami- seen, työterveysyhteistyöön ja työterveys- huollon toimiin analyyttiseen ja kompleksiseen systeemin komponentteina. Haimme vastauksia seuraaman tutkimuskysymyksiin: 1) millaista työter- veyesyhteistyö oli ja 2) miten monitoimijainen yhteistyö toteutui ja mitä seuraamuksia sillä oli kuntoutuksen toteutukseen?

Kuntoutus työuran jatkamisen tukena


**Aineisto ja menetelmät**


HR-asiantuntijoiden haastattelujen teemat olivat: kuntoutuksen valinta ja hakeminen, kuntoutuksen tarpeenmukaisuus, toimijoiden roolit ja tehtävät, kuntoutuksen ammatillisuus ja työkykyentä, kuntoutuksen hyöty ja vaikutukset sekä tiedonkulku, viestintä ja yhteistoiminta kuntoutusprosessissa. Haastattelut kestivät keskimäärin 40 minuuttia ja ne litteroitiin sanatarkasti, jolloin aineiston pituus riviväliinä 1 oli yhteensä 80 sivua. Aineisto analysoitiin laadullisen aineiston Atlassi analyysiohjelmalla. Sisällönanalysissä puheaineistoa jäsenettiin arviointiteemojen mukaisesti vastaamaan kysymyslähtöisesti arviointikysymyksiin.

Työterveyshuoltojen aineisto koostui kyseisestä ja haastatteluaineistosta (Seppänen-Järvelä ym. 2015b). Kyselyt ajoitettiin kuntoutusryhmän aikataulun mukaisesti, ja kyselyiden väli vaihteli seitsemästä kuukaudesta yhteen toisesta kuukauteen. Työterveyshuollolle suunnatuista alkukyselyistä (n = 27/54, vastausaktivisuus 50 %) ja loppukyselyistä (n = 34/51, vastausaktivisuus 67 %) analysoitiin ensin aina kokonaisuutenan näiden kymmenen kuntoutujaryhmän toimintaan osallistuneiden työterveyshuollon edustajien vastaukset, jotka liittyivät kuntoutuksen suunnittelun, kuntoutujen valintaan, yhteistoimintaan, vaikutuksiin ja seurantaan. Tämän jälkeen verrattiin tämän aineiston tuloksia muiden TK2-tutkimuksen kuntoutujaryhmien (n = 15) työterveyshuollon edustajien tuloksiin (Seppänen-Järvelä ym. 2015b).

Työterveyshuollon edustajille järjestettiin viiteen ryhmäähaastatteluun osallistui kahdeksan työterveyshuollon edustajaa, jotka olivat olleet mukana seitsemän kuntoutujaryhmän

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**Kuva 2.** TK2-mallin kuntoutumispolyku.


Työterveysyhteistyön toteutumisen näkökulmasta havaitsimme vain muutamia eroja työterveyshuollon kyselyissä verrattaessa kymmenen kuntoutuujaryhmän työterveyshuoltojen vastauksia muiden TK2-kuntoutujaryhminen työterveyshuollon edustajien vastauksiin (ks. kuva 3) Kolme tärkeintä tiedonlähettä olivat samoja, mutta kyseisten kymmenen työpaikan työterveyshuollon toimijoista reilu kolmannes piti työantajan edustajalta saamaansa tietoa kolmen tärkeimmän tietolähteen joukossa, kun vastaava osuuus muussa aineistossa oli noin 10 %. Samoin tässä aineistossa jonkin verran suurempi osuuus työterveyshuollon toimijoista oli yhteydessä työantajan arvioitaessa työhön tai ammattiihin liittyvää kuntoutustarvetta.

HR-asiantuntijoiden haastatteluista tarkasteltiin sitä, kuinka työterveysyhteistyö toteutui erityisesti kuntoutuksen suunniteltavassa ja kuntoutujien valinnan vaiheessa. Tämän tarkastelun tulokset syntyneeseen jäsenyksen yhdistettiin työterveyshuollon ryhmähaastatteluaineisto: litteroiduista työterveyshuollon työterveysyhteistyöta sitaadit sitaadit niiden työterveyshuollon edustajien osalta, jotka olivat mukana kuntoutujaryhmien toiminnassa (taulukko 1). Lisäksi tämän aineistoon koottiin tapaustutkimusaineistosta, joiden kuntoutujan vertailu-tutkimuspyynnöt kyselyisiä vastauksia perustuvat1 kuntoutumisprosessikuvausen työterveys- ja kuntoutustyöteestyön näkökulmasta. Tämän jälkeen tarkasteltiin työterveysyhteistyön toteutumista...
ja sen seurausia kuntoutujaryhmittäin sekä työterveyshuoltojensa ymmärtämisen ansiosta. Kuinka monet osalta analyysissä olivat kaikki erityisesti kuntoutujaryhmien ajankohtaisesti ja moninäkökulmaisesti, työterveyshuollon toiminnassa ja kuntoutujien valinnassa tärkeänä.

**Kuva 3. Työterveyshuollon oma arvio roolinsa tärkeydestä työkyvyn tukevissa TK2-päätöksissä.**

Tulokset

Työterveyshuollon rooli ja tehtävät TK2-kuntoutusmallissa

Työterveyshuoltojen jäsenen rooliin ja tehtävissään on erottunut kymmenen kymmenen vuoden aikana, kun kuntauksessa tapahtuu yhteistyötä työterveyshuollon ja kuntoutujen välillä. Työterveyshuoltojen rooli ja tehtävät ovat tärkeät TK2-kuntoutuksen eri tilaisuuksissa, ja kuntoutujan yksilölliseen tapaamiseen osallistuu työterveyshuollon edustajia.

Noin puolet kyselyyn vastanneista työterveyshuollon edustajista osallistui TK2-kuntoutuksen eri tilaisuuksiin, ja kuntoutujan yksilölliseen tapaamiseen osallistunut 40% työterveyshuollon edustajista. Hankkeen aikana työterveyshuollon edustajista noin joka viides (21%) oli yhteydessä työnantajan sähköpostitse ja joka kuudes (18%) puhelimitse. Kuntoutuksen aikana esimiehen kanssa palavereja oli sopinut 9%. Suurin osa työterveyshuollon edustajista arvioi yhteistyön työnantajan kannsa onnistuneen hyvin koko kuntoutusprosessin ajan. Useampi kuin kolme neljästä työterveyshuollon edustajasta oli sitä mieltä, että uusi TK2-kuntoutus sulaautui hyvin osaksi työterveyshyödyntäytöä. Työterveyshuollon edustajista kolme neljästä koki pystyneensä vaikuttamaan suunnittelukokouksessa kuntoutuksen kohderyhmän vaillintaan, noin puolet riittävästi kuntoutuksen teemoihin ja vajaa puolet ryhmäjaksojen aikataulutukseen tai kestoon.

![Kuva 3](https://example.com/kuva3.png)
Työterveysyhteistyö kuntoutujuryhmä- ja kuntoutujakohtaisesti

Kuntoutusprosessin aikaisen työterveysyhteistyön vetovastuun perusteella TK2-kuntoutuksessa toteutunut työterveysyhteistyö voidaan tyyppitellä kolmeen kohdallakseen: yhteistoimijat, työnantajavetoiset ja työterveys-huoltovetoiset. Työterveysyhteistyö toimii esimerkiksi kuntoutusprosessin aikana, kun työterveysyhteistyön oikeus auttaa kuntoutuja selvittämään tarvitsemansa tukia ja kehittämään työelämän tulevat. Työterveysyhteistyö voidaan tarkastella eri välinen ja eri tavoitteet, mutta keskeinen näköalaa yhteistyön ongelma on sen tarkoitus auttaa kuntoutujaa kehittyä ja saavuttaa paremman työelämän.

Työterveysyhteistyön toteutuminen ja sen vaikutus kuntoutusprosessissa

Seuraavaksi kuvaamme esimerkein, kuinka työterveysyhteistyö käytännössä toteutuu ja millaisia seuraamuksia sillä on kuntoutuksen toteutumiseen.
Ensimmäinen esimerkki yhteistoimijaisesta työterveysyhteistyöstä oli monipaikkaisesti toimivasta organisaatiosta. Työterveysyhteistyössä palvelut tuotettiin saman palvelutuottajakonsernin kautta, mutta työterveyshuollon palvelutuottajan eri toimipisteiden välille yhteistyö suoritettiin valmistelussa ja toteutuksessa oli vähäistä. Työntekijän arvioen perusteella toimijat eivät ymmärtäneet yhteistyötä, vaan jossakin tapauksessa kahvatuksii tapahtuivat yhteistyön vietoon.

Työterveyshuolton koordinoimassa työterveysyhteistyössä sekä työntekijän että työntekijähallinnon proaktiivisuus on tärkeää, sillä työterveyshuollon tuskakokonaisuus vaikuttaa jatkuvuuteen ja tulevat muutokset. Työntekijän ja työntekijähallinnon on eri tavoilla koordinoidaan yhteistyötä. Työntekijän arvot tulisivat yhteistyön osuusasteen perusteella.

<table>
<thead>
<tr>
<th>Kuntoutujaryhmät</th>
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<th>7</th>
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<th>4</th>
<th>10</th>
<th>5</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Työterveysyhteistyö</td>
<td>yhteistoimijat</td>
<td>työnantajavetoiset</td>
<td>työterveys-huoltovetoiset</td>
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<td>HR arvio: yhdessa</td>
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<tr>
<td>Kuntoutukajohtainen yhteistyö</td>
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</tbody>
</table>

Kuntoutuksessa käytetty työterveysyhteistyö nähtiin monipaikkaiseksi. Työntekijän ja työntekijähallinnon välinen yhteistyö on tärkeää, sillä jokainen työntekijä on eriarvoinen ja sen tulee olla mahdollista ja valmis työntekijän kannalta.

| Kunnoutumus-aikana työterveys- ja kuntoutusyhteistyön toteutuminen |
|----------------|---------------------|------------------|
| Ensimmäinen esimerkki yhteistoimijaisesta työterveysyhteistyöstä oli monipaikkaisesti toimivasta organisaatiosta. Työterveyshuollon palvelut tuotettiin saman palvelutuottajakonsernin kautta, mutta työterveyshuollon palvelutuottajan eri toimipisteiden välille yhteistyö suoritettiin valmistelussa ja toteutuksessa oli vähäistä. Työntekijän arvioen perusteella toimijat eivät ymmärtäneet yhteistyötä, vaan jossakin tapauksessa kahvatuksii tapahtuivat yhteistyön vietoon. Työntekijän ja työntekijähallinnon on eri tavoilla koordinoidaan yhteistyötä. Työntekijän arvot tulisivat yhteistyön osuusasteen perusteella. |
yhdyshenkilö vaihtui, ja nämä tehtävät, esimerkiksi esimiehen informointi, jäivät työterveysjohtajalle. Työterveysjohtaja ei osallistunut tilanneanalyysiin, koska TK2-malli ei sitä edellyttänyt. TK2-mallissa edellytettiin esimiehen ja työntekijän käyvän yhdessä keskustelun ja täyttävän työn ja työpaikan muutoksia sekä tulevaisuutta koskevan selvityslomakkeen. Tässä tapauksessa valintavaiheessa selvityslomakkeet tulivat työterveyshuoloon vasta, kun hakemukset ja B-lausunnot oli tehty. Työterveyshuollon kyseisväastauten mukaan kuntoutujan työtä, ammattia tai organisaatiota koskevan tiedon saamisen kolme tärkeintä lähdettä olivat terveystarkastukset, kuntoutuja itse sekä yleinen työpaikkaesvitys, eivätä selvityslomakkeet, kuten prosessin perusteella olisi voinut olettaa.


Pohdinta
Tutkimuksen aineisto toi esille tämän tyypisen verkostomaisen kuntoutuksen luonteen kompleksisena ilmiönä. Kuntoutuksen ja kuntoutumisen tulokset ja vaikutukset syntyvät siitä, kuinka interventio toimii suhteessa muiden kompleksisen systeemin komponenttien ja alasysteemeiden kanssa (ks. Westhorp 2013; Byrne 2013). Kompleksisissa järjestelmissä itsenäisesti ja vuorovaikutteisesti toimivien yksittäisten ammattilaisten, toimijatahojen ja työntekijöiden ryhmin toiminnan tavoitteet voivat olla erisuuntaisia (ks. myös Pitkäaho 2011). Tämä tuli esille edellä kuvaamissamme työterveysyhteistyön esimerkkeissä, jotka toivat esille TK2-kuntoutuksen luonteen kompleksisena sosiaalisena interventionina. TK2-mallin mukaisen kuntoutuksen taustalla oli näkemys, että työpaikan ja sen henkilöstön kuntoutustarve on selvillä työterveysyhteistyössä; kuntoutus kohdistetaan tämän tunnetun tarpeen mukaisesti, ja kuntoutuksen toteutukseen osallistuvat niin työpaikan kuin työterveyshuollon edustajat. Tämän tut-


Kuntoutukseen osallistuvien tahojen roo-lien ja tehtävien selkeys on edistävä tekijä kuntoutuajan kuntoutumisessa, mutta ei kui-tenkaan välttämättä takaab onnistunutta kun- toutusprosessia (vrt. Chamberlain ym. 2009); olennaisempaa on monitoimijainen yhteistyö. On havaittu, että työhyö paaluuseen liittyvien eri tahojen (työntekijä, työnantaja, maksaja, terveydenhuollon palvelujen tarjoaja, yhteis- kunta) tavoitteissa, motivaatioissa, kiinnos-tuksen kohteissa ja asioissa on eroja, mutta kaikki ovat kiinnostuneita siitä, että työnteki-jä pääsee oikea-aikaisesti ja pysyvästi töihin. Moni toimija haluaa tietää, kuinka hyvät mah-dollisuudet työntekijällä on työssä jatkamisen suhteen sekä kuinka hyvin hän pääsee tähän tavoitteeseen. Eri tahot ovat kiinnostuneita myös siitä, mitä tekijät tukevat työntekijän työhyö paluuta, ja he haluavat tietää hyödyt, jotka ovat yhteydessä työhyön paluuseen. Moni toimija haluaa tietää myös, seurataanko työ-hön paluun toimintatapojen ja käytäntöjä tyy-dyttävästi. (Young ym. 2005.)

Vaikka työhyö liittyvän tiedon siirtymises-sä esimieheltä työterveyshuoltoon oli kehit-tämishankkeen käynnistämisvaiheessa haasteita, TK2-mallissa onnistuttiin kuntoutuksen kytkemisessä kuntoutujiin työhyön, ja esimie- het osallistuivat aktiivisesti kuntoutuukseen. Työntekijän työkyvyn tukemisen tulisi työter-verysyhteistyössä olla jatkuvaa toimintaa. Esi-


Kaikkia TK2-kuntoutujia käsitteää arviointitutkimus osioittaa, että TK2-kuntoutus kohdentui tarpeenmukaisesti, sillä siihen valiko- tui työntekijöitä, joilla oli muuta henkilöstöä enemmän sekä työhön liittyviä muutoksia ja kuormitustekijöitä että terveyteen ja toimintakykyyn liittyviä ongelmia. Kuntoutuksen myönteiset vaikutukset tulivat esille kuntou- tujen arvioissa omasta työkyvystään. Työhön liittyviä myönteisiä muutoksia ilmeni erityisesti niissä tekijöissä, joissa kuntoutujien ti-

### Tiivistelmä


**Abstract**

Collaboration between workplace and occupational health as the enabler of rehabilitees’ work-related rehabilitation process

Finnish Social Insurance Institution launched a developmental project (2012–2014) in which a new way of conducting vocational rehabilitation was developed. This work-related rehabilitation aimed at close collaboration with employers, employees, Occupational Health (OHS) and rehabilitation services. In this study, which is part of the evaluation research project related to the developmental project, the aim was to clarify, what kind of cooperation between workplaces and OHS did occur, how the multiagency cooperation succeeded and what consequences this did have to the rehabilitation? Data was gathered from the ten workplaces attending to the project, from where the representative of the Human Resources (HR) had been interviewed during the evaluation research project. Data from their OHS’s professionals were collected by two questionnaires and from five focus group interviews. Also, we could include to this study outcomes of five rehabilitees’ processes. The project has been evaluated by using multiple-constituency approach. Multiple data was jointly used in researchers’ collaboration during the steps of analysis. In cooperation with the workplace and the OHS the level of the recognition for the different needs of support and rehabilitation, and ways of cooperation varied a lot. Critical phases in respect of the distribution of the flow of the information seemed to be the changes of personnel at the HR or the reversal of the OHS provider. Though the HR was active in multiagency cooperation the supervisors didn’t necessarily were ready for the cooperation needed at the workplace and with the employees. The case management role was not fully recognized in OHS during the developmental project though many new impacts of complex collaboration was received both to employees and to processes of OH. In the multiagency collaboration the clarity of roles and tasks promotes rehabilitees in their rehabilitation processes, but the quality of collaboration seem to be fundamentally important.

Kiitämme tutkijakollegoitamme Vesa Syrjää (THL) ja Matti Tuusaa (Kuntoutussäätiö) tii- viistä yhteistyöstä.
Lähetteet


IV
Mechanisms and Paths in Work-Related Rehabilitation. A Multiple Case Study with a Qualitative Comparative Analysis (QCA)

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Abstract

Purpose
The utilization of vocational rehabilitation interventions has been belated in preventing prolonged work disability. The early-onset vocational rehabilitation concept was launched in 2012–2014, which aimed at close collaboration with employers, employees, occupational health and rehabilitation services. The aim of this study was to discover mechanisms and pathways which promoted rehabilitees’ job retention.

Methods
The study was based on the multiperspective design applying all the stakeholders. It was a qualitative data dominant case study using also the mixed-method research approaches. The data consisted of interviews of 11 rehabilitees and all their stakeholders, the rehabilitation documents and the rehabilitee’s survey questionnaires gathered before and after intervention. The data was constructed to case descriptions. To the across-case analysis we applied the Qualitative Comparative Analysis (QCA).

Results
The factors promoting or inhibiting rehabilitation process were interwoven and formed dynamic mechanisms.

The new model of work-related rehabilitation supported job retention of rehabilitee, if a rehabilitee had an active personal agency and the rehabilitation was conducted at the right time in terms of the rehabilitee’s readiness.

The job retention increased also, if the rehabilitee’s supervisor had the capacity and readiness to make workplace adjustments. Also the different stakeholders had to have shared view on the main goals and means of rehabilitation.

Conclusions
When investigating outcome of social interventions in a complex system, this kind of new ways of analyzing both the mechanisms and effects are needed. Also when pursuing effects of job retention, it’s not enough that workplace is in focus, they should also participate.

Keywords
Vocational rehabilitation, Case study, Evaluation Research, Qualitative Research
The ethical review was carried out in the ethical board of the Finnish Social Insurance Institute. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from the individuals included in the study.

Author Pirjo Juvonen-Posti, Author Riitta Seppänen-Järvelä, Author Mikko Henriksson, Author Sanna Pesonen, Author Vesa Syrjä, Author Matti Tuusa and Author Minna Savinainen declare that they have no conflict of interest.

The article contain two pieces of Supplementary Materials. The Online Resource 1 describes the multistage intervention of the multi-disciplinary work-related rehabilitation model. The Online Resource 2 contains the description of the 11 rehabilitees, secondly the changes which happened during their rehabilitation compared to their goals and thirdly the description of different kind of job retention effects in a tableform.
1 Introduction

Vocational rehabilitation [1] is one of the key measures in preventing prolonged or permanent work disability in western countries. Yet the utilization of vocational rehabilitation interventions has been belated [1–5]. Recently new earlier onset models of work-related rehabilitation for job retention has been created [1]. The effects of the vocational rehabilitation interventions in return-to-work are well reported [6–8], while the different effects of early intervention for job retention are contradictory or controversial [7, 9–10].

Burström et al. [11] reported biased selection into vocational rehabilitation: greater likelihood for men, younger people, those with longer-term sick leave, those with lower income, employed rather than unemployed people and those with musculoskeletal and mental disorders or alcohol abuse. Selection into vocational rehabilitation was perceived as important for successful outcomes, but success also depended on the state of the local labour market. Poor access to rehabilitation implies extended periods of sick leave and to the detriment of the individual, the employer and the society. Specific matching of vocational rehabilitation to the needs of the individual and careful selection of which individuals to interventions may increase the effectiveness. Holding a coordination meeting among different rehabilitation actors for persons on long-term sick leave increased the probability five-fold of an active rehabilitation measure being initiated, and doubled the probability that adaptation at the workplace would be started.[11]

Factors related to individual, work, workplace, social security and compensation systems, and the availability and competence of the health and rehabilitation professionals, are interconnected in different combinations and effecting to the outcome of the implementation of the interventions in return-to-work processes [7,12] i.e. promoting work ability and preventing disability are complex interventions. Traditionally, the effectiveness of vocational rehabilitation interventions has been evaluated in random control trials as a decrease of sickness absence days or work disability [13]. However, in terms of the evaluation research, what is happening during the intervention is not only important because of its developmental function, but also to understand outcome data: what the outcomes are outcomes of [14].

In this evaluation research of the new work-related rehabilitation concept, which aimed to meet the needs of both a rehabilitee and her/his workplace in close collaboration of all needed stakeholders [12], we assumed, as the theoretical background of the change needed for more sustainable impacts, the following four
issues: (1) Work-related rehabilitation process is a social intervention in a complex system [15]. (2) The outcomes and impacts of rehabilitation are due to interaction between the intervention and other components and subsystems (workplace, occupational health care, one’s life situation) of the complex system [16–17] and the processes are nonlinear and multistage [18]. (3) The outcomes emerge through contextual mechanisms according to the realistic evaluation theory [19]. (4) The rehabilitees’ active personal agency, readiness and motivation for rehabilitation and shared agency with stakeholders of the process is key to a sustainable outcome of rehabilitation. [20–21]. However little is known of what are the outcome mechanisms of these social interventions in the complex systems.

Therefore the main aim of the study was to discover mechanisms and pathways, which promoted job retention amongst rehabilitees attending the work-related vocational rehabilitation conducted in 2012–2014. We analyzed the 11 rehabilitees’ rehabilitation processes with the mixed methods approach where we integrated the evaluation of the implementation and of the effects of the intervention. We also added the Qualitative Comparative Analysis – method used earlier on other research contexts but not in rehabilitation research.
2 Intervention

One of the key elements in this concept for early-onset work-related vocational rehabilitation was close collaboration with employers, employees, occupational health services and rehabilitation service providers. In addition, the rehabilitation should be flexible and correctly timed based both on individual’s and employer organization’s needs. The role and missions of the employer in the rehabilitation intervention were written in the standard guiding the implementation of the rehabilitation. Occupational health care’s role was vaguer, depending on the scope of the contracts the employers had made. The intervention is illustrated in the figure 1 and described in the Online resource 1.

Figure 1. The structural model of the new work-related multidisciplinary rehabilitation
3 Materials and Methods

3.1 Study Design

The successful implementation of the aforementioned intervention needed cooperation between many actors. This was the reason to base the study on the multiperspective analysis applying all the stakeholders [22], which were active in the rehabilitation process [12, 23–24] (see Figure 2). The study applied both the case study research [25] and the principles of the mixed-method [26–28] research approaches. Mixed methods was applied because it enabled to combine qualitative and qualitative research approaches, especially inference techniques for the purposes of depth of understanding and corroboration [29]. The foundation for the study design was triangulation of the data sources and methods as well as analyst triangulation (see Figure 2). The triangulation [27, 30] and inter-method mixing [31] was adopted to gain an in-depth understanding of the complex [17] and multi-faceted nature of the rehabilitation processes. Our interdisciplinary research team had a common interest and a focus based on the research questions and the theoretical framework.
3.2 Participants and Data Collection

The data set consisted of semi-structured interviews of 11 rehabilitees and the stakeholders of their rehabilitation processes. The interviewed stakeholders were rehabilitee’s supervisor, the professionals of the occupational health services appointed by the rehabilitee and the interprofessional team of rehabilitation service provider (see Fig. 2). In addition, documents for rehabilitation and rehabilitee’s survey questionnaires gathered before and after intervention were also used.
The 11 informed consent rehabilitees (see Open Resource 2) were recruited from those 233 employees, who attended the work-related rehabilitation intervention [32]. The strategy for selection of the cases was information-oriented selection in order to obtain maximum variation of cases [33]. The selection criterion was to incorporate the variety of the employees after age, sex, occupational status, sector of the employer and to select rehabilitees from all the five rehabilitation service providers who delivered this rehabilitation concept. One researcher phoned the potential participants and gave them information about the study. At this point two rehabilitees refused. In these cases another rehabilitee with same sex and gender from the same rehabilitation group was then invited to the interview. The next step was to recruit the stakeholders involved in each participant’s rehabilitation process. None of them refused, so the total number of interviewees was eleven supervisors (n=11), one or two representatives of their occupational health units (n=14) and the professionals (n= 20) of their rehabilitation services in six focus group interviews.

3.3 Data Analysis

According to the mixed methods convergent parallel design [28], multiperspective qualitative data (interviews and documents) and quantitative data (questionnaires) were merged. The multi-perspective data was constructed to case descriptions on the rehabilitee’s rehabilitation processes. During the analysis process we learned to exploit multiple ways of seeing the data [34] and to triangulate the data sources and the methods in the interpretative analysis. For example, we exploited a web-based platform to carry out the simultaneous analysis of the anonymized data. To the across-case analysis we applied the Qualitative Comparative Analysis (QCA) [35–38]. On this phase the data was transformed from qualitative to quantitative. In the analysis multiple data was jointly used in researchers’ collaboration during the steps of analysis and the level of integration of data on this phase was merging, integration through data transformation towards joint display [39]. The data analysis procedure was a stepwise process integrating within-case and across-case analysis approaches [40]. This study involved both abductive and retroductive reasoning [41].

In the first, through a case-specific [26] merged analysis 11 case descriptions describing each case individual experiences in a context of its own were created. In this fully integrated data analysis the interviews were analyzed in conjunction with the questionnaires and documents. The content analysis within-case was driven by the research questions and each case description was structured in six themes: 1) education and occupational background, 2) need for rehabilitation, 3)
rehabilitation process, 4) work-relatedness of rehabilitation process, 5) attainment of rehabilitation goals, 6) mechanisms that prohibited or promoted rehabilitation. Questionnaire done before intervention had a vital function in illuminating participant’s expectations of the rehabilitation and again the questionnaire done after the intervention described rehabilitee’s thoughts of the rehabilitation process. From the data analysis perspective, the documents for rehabilitation had minor importance, although, they revealed the need and goals set for rehabilitation. At last we capsulized the changes of the multi-perspective processes keeping the focus on the work career impacts and this data is given in the Online Resource 2.

Next we focused on the across-case analysis in order to distinguish between information relevant to all participants and those aspects that were peculiar to particular rehabilitees. The most important finding from the within-case analysis was that factors promoting or inhibiting rehabilitation process were interwoven and formed dynamic mechanisms. We realized, that the outcomes, which emerged through the mechanisms, could lead to longer lasting effectiveness and that the outcomes emerge through contextual mechanisms according to realistic evaluation theory [19]. (Figure 3). The outcomes and impacts of rehabilitation were due to interaction between the intervention and other components and subsystems (workplace, occupational health care) of the complex system (Fig.3) [16–17].

![Figure 3. The mechanisms in the rehabilitation process](image-url)
The QCA was applied in order to examine the mechanisms more precisely and to make across-case comparison. In order to evaluate the effects of the intervention using QCA, 11 conditions and one main outcome variable were chosen as components of a truth table (see Table 1.). Given that the evaluation targeted a work related rehabilitation model the ability of the model to promote job retention among rehabilitees was chosen as main outcome variable. QCA allows many conditions, but the more conditions the more possible combinations of conditions, which in turn may cause major difficulties in analysis and too many conditions jeopardizes the main aim of a QCA to establish core elements of possible mechanisms which lead to the outcome [42]. However, since the number of cases was low, a truth table with 11 conditions was not considered too large. Only one of the 11 conditions on the truth table was typically person related (Condition 1, see Table 1). Two of the 11 conditions were outcome variables (Condition 11 and 12, see Table 1), but we report here the analysis of the main outcome. The evaluation focused on the functionality of the rehabilitation process, therefore most of the conditions chosen to the QCA were process oriented. These conditions were focusing on the rehabilitee’s agency in rehabilitation context and the roles and collaboration between actors during the process. An essential characteristic of the QCA is to go back and forth between the results of the truth table and case descriptions. Especially if the results of a truth table indicate inconsistency between the cases it’s important to go back to the case description to find out specific circumstances in each case which could explain contradictory outcomes of QCA.

In QCA analysis each individual case consists of a complex combination of properties. A single condition has rarely an independent impact on the outcome i.e. several conditions are needed in order to reach an outcome. These conditions constitute a causal combination or path. Different paths, combination of conditions may lead to the same outcome. This means that a given causal combination is normally not the only route leading to a specific result, but causality is viewed context- and conjuncture-specific. Question of necessity and sufficiency is vital in QCA techniques. A condition or combination of conditions can be both necessary and sufficient precondition for a given outcome. It can also be necessary but not sufficient or sufficient but not necessary precondition. Another main characteristics of QCA techniques is the acceptance of diversity of data, i.e. every case matters and exclusion of outsiders from the analysis is rejected. A contradictory case is viewed as an exemplar which needs to be investigated more accurately going back to the larger dataset. Because of the context specific approach of QCA it only has a limited level of generalization. [36–37]
QCA requires in-depth qualitative knowledge of each case: complete multi-perspective data set of the cases was available in the case descriptions. QCA requires also the theory of change, this was created inductively from the multiple data and was reduced to a table (see Open Resource 2). The realization or non-realization of the main outcome condition or variable (see Table 1.) of which the causes or the causal link between other variables were looked for. After chosen the cases and creating the conditions, the team of researchers scored all cases after the crisp set QCA, 0 meaning that the condition wasn’t fulfilled or was absent or 1 meaning that the condition was fulfilled or was present, on their outcome achievement and reduced the rich data set to numerical summary, i.e. the transformation from qualitative to quantitative data. The scores were adopted in two phases to the truth table values of each case in every condition: first each researcher did her/his own scoring and after that they were negotiated in the multidiciplinary team, especially those which weren’t agreed. The multidisciplinary research team sought the joint understanding of conclusions, and because the data was partly inconsistent researcher team added to the binary classification (1/0) the third class (0,5) in the QCA truth table. The comparison of the cases was done according to the scores in the truth table based on both data and theory, so according to the abductive and retroductive reasoning [41].

The analytical process was based on case-by-step and multiperspective descriptions of cases, and then analyze the cases in parallel. It was essential to look at each case in its own context [40]. The qualitative features of the cases were structured [43] so that the features of the phenomenon could be detected and identified at the exact level [40]. In this study the multiperspective data contained many and multilevel interpretative features, such as interpersonal interaction and social structures, the challenge was to construct from single cases to a new, constructive entity on a generalized level. Preliminary results of the same evaluation target from different perspectives may appear in the multidisciplinary team of researchers at first to be mutually conflicting, but the analysis process did not end here, but continued and reviewed the multiple data again. In this way it was possible to create a new more justified interpretation. Resuming, in the analysis, interpretation and reporting of materials, different types of data were analyzed together and merged. When mixed method and multi-perspective research is carried out in a merging way, i.e. preliminary results are to be discussed at an early stage of analysis, the iteration process interferes interpretation during the whole process. Also the confirmation of validity is a result of comparing results of different data and the findings in such a critical view. The result is therefore not only to show the separate results of qualitative or quantitative results, but a joint display. [39]
4 Results

According to our analysis the job retention impacts of the new work-related concept of rehabilitation were following: In nine cases the rehabilitation promoted job retention and in two cases it did not. Qualitative Comparative Analysis (QCA) of 11 rehabilitees made it possible to discover mechanisms and pathways which consisted of different promoting or preventing factors in rehabilitation and according to them the processes could be divided in three main groups. In the group 1 were the processes, where the change and mechanism was from the risk of work disability to job retention and strengthened agency in partnership between multiple actors. In the group 2 the main aim of the rehabilitation was to adjust and modify the work together with the supervisor and/or workplace and in the group 3 the expectations for rehabilitation were associated with improving general health. (Table 1).
Table 1. The mechanisms and pathways of 11 rehabilitees with promoting or preventing factor during their work-related rehabilitation

<table>
<thead>
<tr>
<th>Conditions/ Cases</th>
<th>Group 1, one outlayer</th>
<th>Group 2, one outlayer</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An increased risk job loss due to work disability</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1, Sarah 0</td>
<td>Lisa 0, Tom 0, Susan 0, Helen 0</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>2. Rehabilitation enabled the rehabilitee to exercise an active personal agency</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1, Sarah 1</td>
<td>Lisa 1, Tom 1, Susan 1, Helen 0,5</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>3. The process was conducted at the right time in terms of the rehabilitee’s readiness for rehabilitation</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 1, Tom 1, Susan 1, Helen 0,5</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>4. All stakeholders had a common shared view on the goals of rehabilitation</td>
<td>Mary 0,1, Sarah 0,5</td>
<td>Lisa 1, Tom 1, Susan 1</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>5. The supervisor had the readiness to make adjustments to the job of the employee</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 0, Tom 1, Susan 1</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>6. The rehabilitee was actively supported by occupational health service in achieving the goals of rehabilitation</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 0, Tom 1, Susan 0,5</td>
<td>Rita 1, Patricia 0</td>
</tr>
<tr>
<td>7. Collaboration between the representatives of workplace and occupational health service promoted rehabilitation</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 0, Tom 1, Susan 1</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>8. Peer support had a vital role in achieving the goals</td>
<td>Mary 1, Georg 0,5, Peter 1, Mathias 1, Sarah 0,5</td>
<td>Lisa 1, Tom 1, Susan 1, Helen 1</td>
<td>Rita 0, Patricia 0</td>
</tr>
<tr>
<td>9. The rehabilitation service was adjusted to the needs of the rehabilitee</td>
<td>Mary 0,5, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 1, Tom 1, Susan 1</td>
<td>Helen 0, Rita 0, Patricia 0</td>
</tr>
<tr>
<td>10. The process supported rehabilitee in reaching vocational goals</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 1, Tom 1, Susan 1</td>
<td>Helen 0, Rita 0, Patricia 0</td>
</tr>
<tr>
<td>11. The process promoted functional ability of the rehabilitee</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 1, Tom 1, Susan 0,5</td>
<td>Helen 0, Rita 0, Patricia 0</td>
</tr>
<tr>
<td>12. Rehabilitation promoted job retention</td>
<td>Mary 1, Georg 1, Peter 1, Mathias 1</td>
<td>Lisa 1, Tom 1, Susan 1</td>
<td>Helen 0, Rita 0, Patricia 0</td>
</tr>
</tbody>
</table>
The five rehabilitees in the group 1 were at the beginning of the process in the risk of work disability to job retention. They strengthened their agency in partnership between multiple actors. The exception according to her own choice collaborated only with the rehabilitation service provider while going through her work career change options and she got confidential support by rehabilitation service provider to the rehabilitee in making decisions on future career path. With the four rehabilitees in the group 2 the rehabilitation focused on personal goals aiming to develop their functional ability. In the exception case the process strongly focused on achieving changes at entire workplace, and at least partly missed supporting the needed individual change.

With the two rehabilitees in the group 3 the work related rehabilitation couldn’t promote job retention. Their expectations for rehabilitation were associated with improving their own general health, not work related issues. Neither did the supervisors support them, OHS professional collaborated with the rehabilitee, but the efforts to collaborate with other stakeholder didn’t succeed.

The new model of work-related rehabilitation supported job retention of rehabilitee, if a rehabilitee has an active personal agency and the rehabilitation was conducted at the right time in terms of the rehabilitee’s readiness. Rehabilitation was goal-oriented action, which was based on the rehabilitee’s individual needs. Enthusiastic and motivated rehabilitee participated in defining personal goals and planning own rehabilitation. The new model of work-related rehabilitation offered time and forum to discuss professional identity and active personal agency. The rehabilitees conceptualized their professional agency boundaries; own task area, responsibilities and obligations.

The job retention was also increased, if the supervisor of the rehabilitee had the capacity and readiness to make workplace adjustments. The procedure of management and organization can support personal active agency and rehabilitation involved the actions and development of the work community. In the rehabilitations point of view, the critical mechanisms was that the supervisor was committed and her/his management style supported work ability.

Prerequisite of rehabilitation was usually, that all stakeholders had to have an open, manifold co-operation, in which the different stakeholders had almost common shared view on the goals and means of rehabilitation. The common view was not the absolute prerequisite for the rehabilitation. This model made all stakeholders possible to co-planning common goals and shared decision-making, stakeholders’ commitment, responsibility and common support provision. In practice, the different stakeholders recognized the new opportunities for co-
operation, and used them in different ways. Some of the stakeholders used the network actively. The elements for effective cooperation were supervisor’s activity, positive attitude, good knowledge of rehabilitee’s work and good cooperation. Part of the rehabilitation service providers, occupational health care professionals and supervisors did not know how to take advantage of cooperation opportunities in the new rehabilitation model. A common goal of all stakeholders was not necessarily guaranteed genuine co-operation, if every stakeholders maintained in their own traditional role. Personnel changes in occupational health service and rehabilitation service providers and among supervisors complicated cooperation. Usually, but not in all cases, the peer support had a very significant effect on rehabilitation process to progress positive direction.

The role of occupational health service had to be very active in the case of rehabilitees, whose target of rehabilitation was to prevent permanent disability. The reason for this active role was that the responsibility of promoting and following the rehabilitees transmitted to OHS.

Unlike the aforementioned situation, if the target of the rehabilitation was to change the workplace, the role of supervisor could be very small and the manifold co-operations also dismissed, the rehabilitation was not suffer for that. In that kind of situation, the rehabilitation required rehabilitee’s active personal agency and the support from rehabilitation service provider.

Inversely, QCA comparison demonstrated that, rehabilitation could not support rehabilitee’s job retention, if the rehabilitee was not taken active personal agency, the rehabilitee’s readiness for rehabilitation to the new model of work-related rehabilitation was low, a supervisor was not ready for developing work, the manifold co-operation between stakeholders was not started and the stakeholders had no common view on the goals and means of rehabilitation.

**Discussion**

We discovered the mechanism and factors through which the new concept of work-related rehabilitation promoted or inhibited job retention. The factors promoting or inhibiting rehabilitation process were interwoven and formed dynamic mechanisms in each case. When promoting job retention and preventing work disability with vocational rehabilitation, the findings of this research complement earlier research by stressing that in the focus of vocational rehabilitation should be on the work and workplace [1, 44]. But when pursuing effects of job retention, it’s not enough that workplace is in focus, they should also participate especially
the participation of supervisors is crucial when aiming for sustainable work career solutions.

The rehabilitation programme promoted job retention, if the process is conducted at the right time in terms of the rehabilitee’s readiness for work related rehabilitation, the rehabilitee exercises an active personal agency and thirdly the supervisor of the rehabilitee has the capacity and readiness to make workplace adjustments. Motivation and readiness for rehabilitation are dynamic and contextual in nature and they are generated through the goals of action. When the rehabilitee’s contextual and situational motivation and readiness seem to be weak, it is important that e.g. the occupational health or rehabilitation service professionals try to sort out, what factors may hide behind and discuss these factors in order to alleviate the rehabilitee’s uncertainty towards change and enhance rehabilitees’ motivation to participate and re-think their future prospects of staying at work or returning to work. [45]

The rehabilitees’ process was shaped by one’s expectations of the rehabilitation service, one’s needs and goals for the rehabilitation through one’s own agency. Rehabilitation service process itself, the identified changes and the outcomes were promoted or inhibited by the actions taken by all the stakeholders like the workplace and especially the employee’s supervisor [46], the occupational health and rehabilitation service provider and factors of one’s life situation. The new rehabilitation model was supposed to enable the rehabilitee to exercise an active personal agency. The QCA truth tables (see Table 1) shows that this happened in all cases where the rehabilitation promoted job retention. Also different kinds of collaboration-related conditions were fulfilled in these cases. However it is crucial to recognize the difference between enabling the agency and the actual agency, and also the distinction between collaboration and shared agency. The latter ones have to do with the implementation process of the model. We found that the rehabilitee’s own agency together with the shared agency of other stakeholders taking part were both parts of the mechanisms through which the outcomes of the work-related rehabilitation emerged (see Fig. 3). But more research needs to be done about the formation and scope of the shared agency in these kind of complex work-related intervention processes.

Our findings were manifold, whether the shared agency with stakeholders of the process was a key to a sustainable outcome of rehabilitation. If the rehabilitee had a risk of permanent disability, the occupational health service must have an active role and there must be a collaborative relationship between stakeholders. On the other hand sometimes rehabilitee’s strong personal agency supported only by
the rehabilitation service provider can lead to a good result without shared agency and collaboration with other stakeholders. If the process focuses mainly on making changes at entire workplace, an active personal agency is more difficult to achieve which in turn may have a negative effect on the results on an individual level. Peer support from other rehabilitees and coworkers was important in most cases. These outcomes supports the earlier results of [13], where those whose rehabilitation problems were managed in a project with systematic, multi-professional, intersectorial, client-centered and solution-oriented co-operation – had during the second half-year after the rehabilitation intervention substantially less median days on sick leave per month than the comparison group of all pairs did. The effect was even greater in the pairs with more than 8.5 days sick leave per month before the intervention. [13]

In the study concerning this developmental project and focusing on the collaboration between the workplace and the occupational health services (OHS) as an enabler of the rehabilitee’s process [47] we found, that the level of the recognition for the different needs of support and rehabilitation, and ways of cooperation varied a lot in cooperation with the workplace and the OHS. The collaboration in the multi-actor network was vulnerable in many ways. The changes of personnel at the HR or the reversal of the OHS provider seemed to be critical phases in respect of the distribution of the flow of the information. Though the HR was active in multiagency cooperation the supervisors didn’t necessarily were ready for the cooperation needed at the workplace and with the employees. Also the case management role was not fully recognized in OHS during the developmental project, especially the follow-up was not planned. The cooperation deepened to shared, goal oriented and negotiated collaboration at its best (see Open Resource 2), but this close collaboration was new to all the stakeholders, and there was room for improvement for all the stakeholders in the know-how and analysis of own role and tasks in collaboration. [32, 47]. When designing and implementing new work-related rehabilitation concepts, it is also necessary to build the arenas for collaboration, which enables the participation of all stakeholders needed in each phase.

In addition to the intervention itself, to the work career related outcomes of vocational rehabilitation also affects the selection, context and system factors, i.e. implementation into the complex system in many ways. The effectiveness of vocational rehabilitation interventions has been evaluated in random control trials and the lack of demonstrated benefit turns the interventions ineffective. Especially in the studies of the early interventions there is lack of evidence to support “very
early” intervention compared to usual care [48], but further research is recommended to improve understanding of the factors influencing when and how best to intervene [48]. In addition to using random control trials, the assessment of the effectiveness of the rehabilitation has to take into account also the implementation process of the rehabilitation and the study and description of the mechanisms of possible outcome. In this study routes, mechanisms and effects were results of a complex review, which the study design and analysis methods (multiperspective, multiple case study, comparative analysis with QCA) enabled. The assessment of the effects of the vocational rehabilitation interventions by the qualitative methodology opened the black box of early-onset work-related rehabilitation interventions [49] and its’ work related outcomes in a detailed way, describes changes at work that supports to stays at work in details (see Open Resource 2) like changes of attitude or action of the rehabilitee, other actors, a collaborative action or process of actions. Looking for this kind of changes may be important when in future evaluating the impacts and effects of early intervention for job retention, where reduction of sickness absences or disability pensions cannot always be seen. When discussing of the sustainability of the outcomes (see Fig. 3), we do not have data whether these discovered changes can lead to avoided or decreased sickness absence and permanent work disability rates, neither of that what effects of the early-onset work-related rehabilitation should be looked from the work community and what of them concern mainly individuals.

The use of a mixed-methods approach and Qualitative comparative analysis (QCA) in the evaluation of a vocational rehabilitation concept was a novelty. The QCA techniques aim to integrate case-oriented approach with variable-oriented approach. The comparison could be made systematically between researchers. Our lessons learned support the earlier methodological findings: both in-depth qualitative knowledge of each case and also the theory of change are essential [38–39].

Strengths and limitations of the study were as following: The design of this case study based on triangulation, triangulation of the data sources and methods as well as analyst triangulation, strengthened validity and provided stronger inferences [27]. The strength also of the QCA is that it accepts the diversity of the data and QCA is also a method that can strengthen validity [50]. In accordance with the main principles of making qualitative research results derived from QCA analysis have only limited level of generalization. In this study we composed the truth tables from the data matrix qualitatively, which was time consuming. The limitation of this study was that we didn’t use the Boolean expression [37], with
which some other combinations of conditions could have been found and for more we could have analyzed also other outcomes. The limitation of this study was also that the data collection didn’t include any follow-up: the new model of work-related rehabilitation has the capacity to promote staying at work but long term effects are yet to be seen.

The factors promoting or inhibiting rehabilitation process were interwoven and formed dynamic mechanisms.

The multiperspective mixed methods analyses could tell us, what happened during the rehabilitation process and it is essential for generating insights into what worked, in what context and how [14]. When investigating outcome of social interventions in a complex systems, this kind of new ways of analyzing both the mechanisms and the effects are needed.
References


The description of the early-onset work-related rehabilitation intervention (modification of Hoffman et al, 2014)

<table>
<thead>
<tr>
<th>Brief Name</th>
<th>The Early work-related rehabilitation</th>
</tr>
</thead>
</table>
| Why/Objectives | The objective of the early-onset work-related multi-disciplinary vocational rehabilitation was work disability prevention and to keep the rehabilitee in working life as long as possible. The work-related rehabilitation intervention focused on the needs of the individual employees and the work organization. The aims of this early vocational rehabilitation were that it would a) start earlier than before, b) make the rehabilitation process more flexible and c) integrate the rehabilitation services into workplace efforts aimed at work disability prevention.  
  
  The rehabilitation intervention was arranged in a flexible manner and it took into account the current rehabilitation needs of the individual client and of the group of rehabilitation clients as a whole: the rehabilitation program was modified for each group of clients in cooperation with their employer and occupational health care provider.  
  
  The rehabilitees participated in the planning of the amount and content of the individual sessions, together with the employer and the rehabilitation service provider and occasionally also with the occupational health care. An individual plan and objectives for rehabilitation were made for each rehabilitee.  
  
  The rehabilitation intervention was implemented by a systematic interprofessional collaboration between organizations. Rehabilitation service provider’s team consisted of a physician, a social worker, a psychologist and a specialist in working life issues, and other professionals if needed. The role and missions of the employer in the rehabilitation intervention were written in the standard guiding the implementation of the rehabilitation. Occupational health care’s role was vaguer, depending on the scope of the contracts the employers had made. |
Setting the employer's goals, planning of the process:

The rehabilitation process started by planning the rehabilitation so that it would meet both the needs of the rehabilitee and rehabilitee's employer. In the planning process, the collaboration among the rehabilitation service provider, rehabilitee's employer, occupational health care and the rehabilitee was supposed to be arranged so that it would support the rehabilitation path of the rehabilitee.

Before the actual intervention started a collaborative meeting between all the aforementioned stakeholders was arranged. Each group of rehabilitation clients were selected from a single employer, with the clients' workplace supervisors participating in the assessment of the need for rehabilitation in these meetings. Also the timetable and the amount of group meetings were decided in these meetings.

Summing up the employer’s needs and goals for rehabilitation, choosing the target group from workplace

- One to two co-operative meetings at workplace
- Human Resource Manager, representative(s) from the Occupational Health Care service provider, Service Manager and/or the member of the multidisciplinary team of the Rehabilitation Service Provider

Assessment of the needs:

Intervention started with an individual assessment of each client: the rehabilitee together with the employer pinpointed the work-related problems in a discussion that was called for and held by the rehabilitation service provider. During the individual assessment it was decided what kind of individualized parts of rehabilitation were included in each rehabilitee's path of rehabilitation and how were they scheduled.

- Individual assessment of the needs for rehabilitation.
- One meeting with one's supervisor, the supervisor’s statement of the situation at workplace and in the employee’s job
- One to three meetings at the Occupational Health Services (OHS) location: usually one with the occupational health nurse and one with the physician, sometimes also with other experts like occupational health physiotherapist

Selection of the rehabilitees by the rehabilitation organizer:

- OHS sent the documents of the assessment phase to the organizer, which included the supervisor’s statement, the employee’s own application to the rehabilitation and the medical certificate by the OHS’s physician including the evaluation of the work ability and need for rehabilitation
Setting the rehabilitee’s goals:

- Summing – up the rehabilitee’s needs and goals for rehabilitation
- One rehabilitation day and one co-operative meeting with supervisor at the rehabilitation service provider location. OHS professionals could also take part.

Rehabilitation intervention actually started with an individual assessment of each client: the rehabilitee together with the employer pinpointed the work-related problems in a discussion that was called for and held by the rehabilitation service provider. During the individual assessment it was decided what kind of individualized parts of rehabilitation were included in each rehabilitee’s path of rehabilitation and how were they scheduled.

Rehabilitation intervention

The rehabilitation intervention consisted of 7–21 full days of rehabilitation in a rehabilitation institution and 3–8 short-term visits to a rehabilitation expert. The meetings could be organized at the rehabilitation institution or in some other suitable location, for example at the employer’s or occupational health care service provider’s premises. The closing phase of the intervention contained a meeting in which the results of the group and individual parts of the rehabilitation were brought together and follow-up procedures were planned together with all stakeholders, including the occupational health care provider.

Rehabilitation service, Group training:

- Two to three group sessions each lasting from 2 to 5 days at the rehabilitation service provider location
- One co-operative meeting day, where supervisors and representatives from the occupational health care were invited at the rehabilitation service provider location

Rehabilitation service, Individual sessions:

- 1 to 5, each lasting from 2 to 4 hours at the rehabilitation service provider location
- At least one session at workplace, where one’s supervisor and often also the representative from the occupational health care were invited
<table>
<thead>
<tr>
<th>Brief Name</th>
<th>The Early work-related rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures: What, Who provided, Where, How, When and How Much</td>
<td>Assessment and summing –up of the rehabilitee’s/employee’s rehabilitation</td>
</tr>
<tr>
<td></td>
<td>• One co-operative meeting lasting from 1 to 2 hours with the employee/rehabilitee and her/his supervisor, the representatives both from the occupational health care service provider and from the rehabilitation service providers team</td>
</tr>
<tr>
<td></td>
<td>• At workplace or at OHS locations or at the rehabilitation service provider location</td>
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<tr>
<td></td>
<td>The coordination of the rehabilitee’s and group service processes by the rehabilitation service provider</td>
</tr>
<tr>
<td></td>
<td>• Coordination and communication of the overall agreed timetable and the changes</td>
</tr>
<tr>
<td></td>
<td>• Arranging all the manifold co-operative meetings: one to two for the planning, one to the assessing the needs and goals for each rehabiliitee, one co-operative day and one summing up meeting for each rehabiliitee</td>
</tr>
<tr>
<td></td>
<td>• Arranging all the individual sessions</td>
</tr>
<tr>
<td></td>
<td>• Reporting to the rehabilitation organizer at the follow-up points</td>
</tr>
<tr>
<td></td>
<td>The follow-up of the rehabilitee’s process by the occupational health service provider</td>
</tr>
<tr>
<td></td>
<td>• Sometimes the follow-up of the t.ex. health factors affecting work ability was agreed to be done by the occupational health service provider during the process.</td>
</tr>
<tr>
<td>Tailoring</td>
<td>The follow-up of employee after the rehabilitation is the OHS duty in Finland.</td>
</tr>
<tr>
<td></td>
<td>The main aim was to tailor the rehabilitation process so that it would meet both the needs of the rehabilitee and the needs of the rehabilitee’s employer.</td>
</tr>
<tr>
<td></td>
<td>The employer’s needs were asked at the first co-operative meeting organized by the rehabilitation service provider.</td>
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<tr>
<td></td>
<td>The tailoring of the rehabilitee’s process took place together with the employer, who pinpointed the work-related problems in a discussion that was called for and held by the rehabilitation service provider. During the individual assessment held by the rehabilitation service provider, it was decided what kind of individualized parts of rehabilitation were included in each rehabilitee’s path of rehabilitation and how were they scheduled.</td>
</tr>
</tbody>
</table>
It has been stressed that the practices surrounding the assessment of the need for early vocational rehabilitation must be improved. Thus, in this rehabilitation intervention particular emphasis was placed on the assessment process. Different ways of assessing were used and it was crucial that the rehabilitee herself had recognized the social and health related factors leading to the need for rehabilitation.

The intervention enabled active role for the rehabilitee and all rehabilitees had customized paths of rehabilitation.

The content of the rehabilitation intervention consisted of procedures aiming to improve the rehabilitee’s work ability and functional capacity. The content was intertwined to rehabilitee’s work, work surroundings, and the life situation and it helped the rehabilitee to understand the mechanisms of her declining work ability and how to maintain it. The intervention also delved into improving one’s health, coping and quality of life. It gave support to the rehabilitee to form a realistic plan to improve her situation together with her employer and the nearest ones. The content of the rehabilitation paths were constructed on the basis of the individual needs of the rehabilitees. The rehabilitation supported both the setting of realistic individual goals and achieving them.

The follow-up after the rehabilitation was the OHS duty, the implementation of which varied a lot.
Online Resource 2

Mechanisms and Paths in Work-Related Rehabilitation. A Multiple Case Study with a Qualitative Comparative Analysis (QCA)

Journal Of Occupational Rehabilitation

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Table Online Resource 2: The compressed multi-perspective case description of 11 rehabilitees’ processes: the changes, which occurred in the rehabilitee’s own and her/his rehabilitation process, and the effects found on the rehabilitee’s work career.

| The characteristics (gender, age group, type of job, type of employer) of the rehabilitees, who were invited to the case study | The changes, which occurred during the intervention in the rehabilitee’s own and rehabilitation process. | Effects on the work career |
1. Mary
   Gender: Female
   Age group: Under 45
   Type of job: Blue-collar
   Type of employer: Private

   The rehabilitee's own agency changed during rehabilitation: after the rehabilitation the rehabilitee was able to work as a member of her work community, compared to that she previously experienced to be outsider. The rehabilitee was able to focus more on her work and the collaborative relationship with her supervisor improved. Her sleeping problems were reduced and social relationships also out of work with other people increased. The individual sessions of her rehabilitation intervention focused on the critical component of her psychosocial functional ability and these intervention were carried out till the edge of the rehabilitee's resources, and the interruption of the rehabilitation process was close. The rehabilitee got a support person from the occupational health care service provider, with the help of whom the rehabilitee could continue her rehabilitation process after the intervention. The rehabilitee felt that during the individual sessions the rehabilitation service did not focus enough on her back pain problem and because of this the functional capacity of her back problems did not change. During the rehabilitation period, there was no cooperation between occupational health care and rehabilitation staff, but in the end, at the summing–up session, all stakeholders got a shared and more comprehensive picture of her situation. It was commonly agreed that the rehabilitee needed tight support for her work ability also after this rehabilitation process.

   Mary's work career continued: same employer, same job. Mary already before the rehabilitation had changed over to the job, which was designed for people with work disabilities. Mary changed her interaction within her work community.

2. Georg
   Gender: Male
   Age group: 45–54
   Type of job: Blue-collar
   Type of employer: Private

   As a result of the cooperation between different actors during the process, a new more shared insight emerged about Georg's work situation and of that there was a threat to lose his job because of his work disability. The rehabilitee's readiness and motivation for the needed changes during the rehabilitation was tested. In his physical capacity aim, Georg achieved part of the objectives set. His physical and social action and the ways of carrying out the work tasks developed. The collaboration between different actors, including his supervisor, during the rehabilitation process enabled the positive outcome.

   Georg's work career continued: same employer, same job. His job retention potential was improved after work accommodation which were both work community based and individually tailored.
### 3. Peter
**Gender:** Male  
**Age group:** Under 45  
**Type of job:** Blue-collar  
**Type of employer:** Private

The rehabilitee’s and other stakeholders’ common goal of the work career change was realized. The rehabilitation service process was carefully tailored after his needs. The multistage tailored rehabilitation process could offer him the multi-disciplinary and intensive enough support. Without this kind of support the launch of the decisions and changes the rehabilitee needed to do could have taken significantly a longer period of time. Without this support, also the rehabilitee’s process would not necessarily have resulted in the retraining and deployment.  

Peter entered the re-education programme aiming to redeployment after the qualification from the vocational training, which started during the rehabilitation, his former employer deployed him to a new job.

### 4. Mathias
**Gender:** Male  
**Age group:** Over 54  
**Type of job:** Blue-collar  
**Type of employer:** Private

The rehabilitee had a strong own agency and professional identity: his aims were to continue full-time in his old duties despite of his work disability. All the other stakeholders including human resource management and occupational health care professionals had suggested him to redeploy to other duties due to the long-term sickness absence during the year before the rehabilitation intervention. The rehabilitee’s own expectation for the rehabilitation was the better fit of back muscles in order to reduce his back pain. He could work fulltime the whole year the rehabilitation took place, but soon after the rehabilitation he was on a new period of sickness absence.  

Mathias’s work career continued. First he continued in his old job: the started to work in pairs, and he could talk about his limitations to work due to his work disabilities to his workmates, after which his mates helped him to complete the tasks. After the rehabilitation year he was redeployed: same employer, new job which was specially designed for people with work disabilities.

### 5. Sarah
**Gender:** Female  
**Age group:** 45–54  
**Type of job:** White-collar  
**Type of employer:** Public

After the restructuring and several other changes in her work organization, the rehabilitee felt that she was in a situation where she couldn’t any more influence sufficiently enough to her work. Her own social status and the meaningfulness of work were questioned and she was exhausted. The rehabilitee had begun to consider becoming an entrepreneur even before the rehabilitation, and decided to set up a business during the rehabilitation process. Sarah’s attachment to rehabilitation was controversial. The rehabilitation service producer supported her career plan.  

Sarah’s work career continued: work career transition from an employee to an entrepreneurship.
| 6. Lisa | The aim of Lisa’s rehabilitation was to support her return to work – process after the recovery from the burnout. The co-operation in Lisa’s matters between the occupational health and rehabilitation service providers was low. The supervisor made a strong effort. Lisa’s supervisor carried out the work-related issues, which rouse during the rehabilitation, together with the rehabilitee to the work community. F.ex. rules for working time were wrote out. Lisa’ goals set for rehabilitation were related to the development of workmanship, coping and managing her workload, and they were achieved. Lisa’s rehabilitation process speeded up her recovery from the burnout. | The work career continued. The same employer, the modified job: the work delimit into the basic work tasks facilitated the process of returning to work. |
| Gender: Female | | |
| Age group: 45–54 | | |
| Type of job: White-collar | | |
| Type of employer: Private | | |

| 7. Tom | Tom’s awareness of the needed changes for a healthier life style increased. He could improve his control of work with the help of small changes in the ways he acted at work. He involved the whole work community to the implementation of the needed changes. Both the occupational health care and his supervisor recognized the importance of the follow-up after his rehabilitation. Because of the financial uncertainty of the workplace Tom made alternative plans for his work career. | Toms’s work career continued: same employer, same job. His job control improvement, and follow-up of the coping at work with his supervisor started. |
| Gender: Male | | |
| Age group: 45–54 | | |
| Type of job: White-collar | | |
| Type of employer: Private | | |

| 8. Susan | The rehabilitee carried out a number of lifestyle changes. The rehabilitation service was tailored according to the needs and it enabled the Susan’s own agency. The supervisor and her own work community act as part of the rehabilitation process. Occupational health care supported Susan’s staying at work after her returning to work. | Susan’s work career continued: same employer, same job, in which the work tasks were modified. Susan’s possibilities to continue on her job improved after Susan’s own job description was clarified as a part of rearranging the job tasks between workmates. |
| Gender: Female | | |
| Age group: Under 45 | | |
| Type of job: White-collar | | |
| Type of employer: Public | | |
| 9. Helen | The purpose of the rehabilitation process was to develop collaboration in her work community, the need for which the occupational health care had discovered in the workplace survey earlier. Helen’s personal goals also included the development of her work community. The only individual objective was to improve the aerobic fitness, even though the rehabilitee was physically in a good condition. The rehabilitee’s own fears of coping at work were ignored by all actors in the rehabilitee’s goal setting. Helen’s awareness of her own well-being grew during the process and especially the group sessions of the rehabilitation service process supported her coping at work. During the rehabilitation service process the work community issues were developed by involving all the rehabilitees of the group, but the involvement of the supervisor was negligible. However, some of the work community objectives were achieved. | Helen’s work career continued: same employer, same job. Helen’s work community agreed on a common meeting time, which was a change to previous way. |
| Gender: Female | Age group: 45–54 | Type of job: White-collar |
| Type of employer: Public | |

| 10. Rita | Rita’s readiness and motivation to the work-related rehabilitation was low. Rita’s supervisor’s readiness to modify her working environment was low even though the occupational health physiotherapist advised the rehabilitee to change her workplace. Rita pondered a lot of her life and choices. Healthier lifestyle changes started, but the accident did hinder the implementation of these set goals. | Rita’s work career continued: same employer, same job. The proposed solutions as the changes in her work environment or redeployment didn’t came into operation. |
| Gender: Female | Age group: Over 54 | Type of job Blue-collar |
| Type of employer: Public | |
| 11. Patricia | Patricia had difficulties to find her opportunities to choose and act, to gain her own active agency. She gained some benefit from rehabilitation. As regards the improvement of stress management, the outcome was contradictory. The co-operation between the stakeholders during the rehabilitation was unbreakable, partly because her supervisor changed during the rehabilitation process. The rehabilitation professional discovered that the atmosphere of the work community was problematic and brought it up. Finally at the end of the rehabilitation process in the summing up meeting, the occupational health care actors decided to put into operation the workplace health risk assessment. |
| Gender: Female | Patricia’s work career continued after her voluntary job alteration leave: same employer, same former job. There were attempts to affect to the bullying at the workplace. |
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A MULTIPERSPECTIVE AND MIXED METHODS STUDY OF ITS MECHANISMS

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