Return to work for temporary agency workers and unemployed workers, sick-listed due to musculoskeletal disorders

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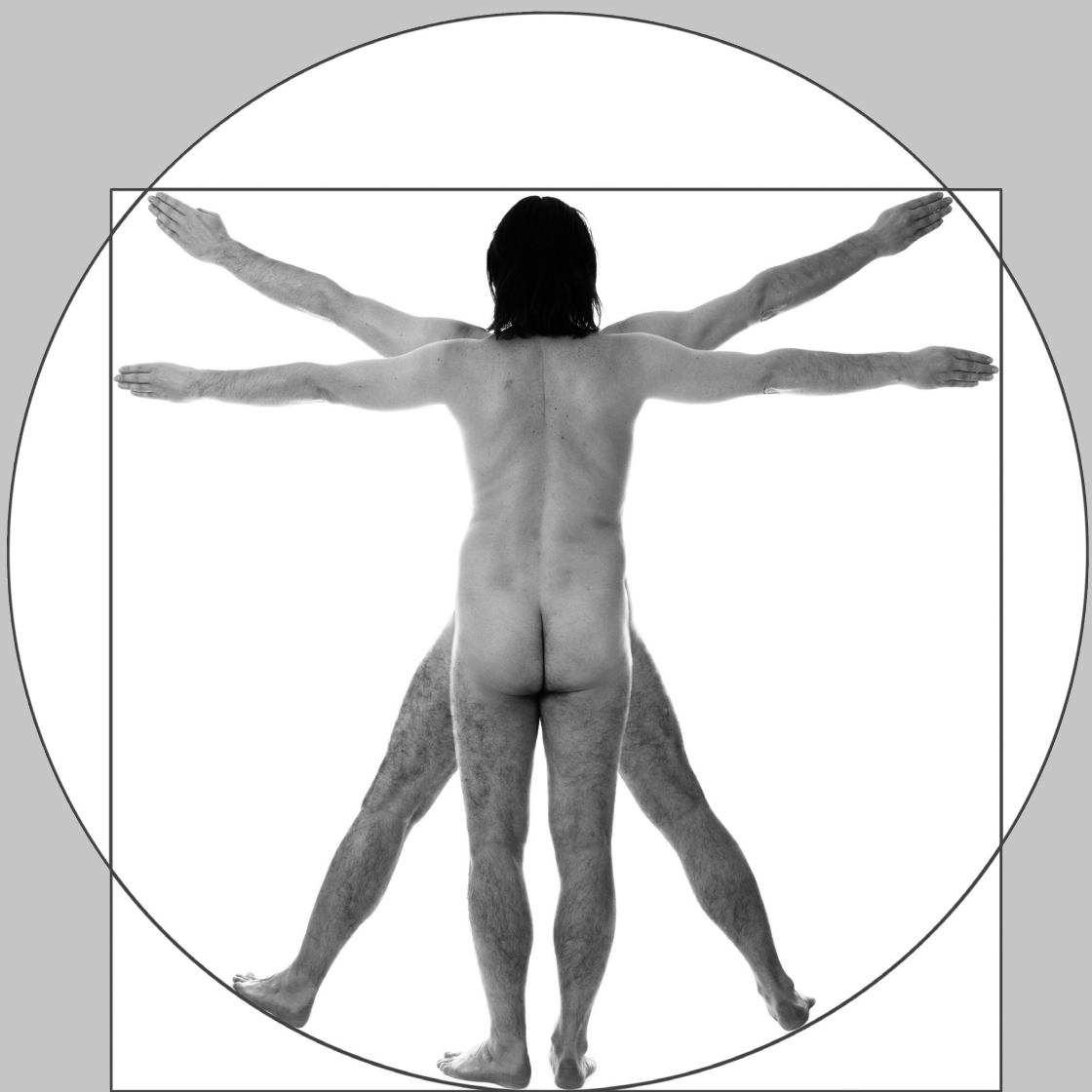
2012

document version
Publisher's PDF, also known as Version of record



Chapter 1

General introduction

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Work disability: focus on vulnerable workers with non-traditional employment

The substantial socioeconomic burden of long-term sickness absence in industrialized countries has been underlined by various authors[1-7]. To illustrate, the total cost of illness in Canada in 1998 was an estimated 159.4 billion Canadian dollars (~95 billion Euros) with indirect costs due to short-term and long-term disability representing 6.2% and 20.2%, respectively, of the total annual cost[8]. Furthermore, in the UK in 2007-2008 the annual economical costs due to absence from work amounted to well over 13 billion pounds (~18 billion Euros)[9,10]. Notably, long-term absence (20 days or more) accounted for a massive 40% of all time lost, costing 5.3 billion pounds[10]. In addition, in 2009, at a cost of 16.8 billion pounds (~19 billion Euros) absence from work remained a significant burden to the UK economy[11]. In line with these figures, in the Netherlands, in 2008 sickness absence represented a substantial financial burden for employers with costs amounting to nearly 11 billion Euros[12]. Furthermore, the annual costs for work disability benefits paid by the Dutch Institute for Employee Benefit Schemes in 2007-2008 were approximately 17 billion Euros[13] and even approaching an annual cost of nearly 20 billion Euros in 2009[14]. To further illustrate, the total cost of neck pain in The Netherlands in 1996 was an estimated 535 million Euros[15]. Moreover, Lambeek and colleagues estimated the total costs of back pain in 2007 at 3.5 billion Euros[1]. However, it was not until recently, that sickness absence and related chronic health problems are increasingly considered a public health problem in the general medical literature[16]. In line with this, prevention of (long-term) sickness absence and work disability is nowadays an established topic in the field of occupational health care research. Moreover, there is an upcoming need for evidence-based practise and clinical practise guidelines among occupational health care professionals[17-22]. From this perspective, development of evidence-based occupational health care can be achieved, for instance, by identification of prognostic factors for work disability, by development of theoretical (prognostic) models for return-to-work (RTW), and also by development of (cost-)effective RTW interventions.

Focussing on RTW intervention research in particular shows that the majority of developed RTW interventions assume the presence of a workplace to return to[23-29]. However, although the 'traditional' labour contract (as an open-ended and dependent full-time employment relationship) is still common, in many countries important other, more flexible, forms of labour relations have developed during the last two decades[30]. In the EU, the 'non-standard' employment rate in part-time employment, temporary work, and self-employment (overlaps controlled) increased from 17.5% (1998) to 22.3% (2008)[30]. Furthermore, in 1998 the private employment agency industry constituted of close to 4.8 million agency workers (fulltime equivalent on a daily basis) worldwide[31]. Ten years later, in 2008, the number of workers in this industry had nearly doubled with 9.5 million agency workers (full-time equivalent) employed by private employment agencies across the globe[31]. Japan and the USA are the world leaders representing around 45% of the global agency work market[31,32]. Europe is the leading regional entity, accounting for 48% of global annual turnover, i.e. approximately 111 billion Euros, in 2008[32]. In addition, in the Netherlands, in 2008, nearly 3300 private employment agencies provided 242,000 fulltime jobs (daily average number of FTEs). Hence, in view of this international trend towards transitional labour markets with more flexible employment relationships[33-35], the presence of a workplace to return to when sick-listed is no longer self-evident for many workers. As a consequence, workers without (relatively) permanent employment relationships, such as an unemployed worker or a temporary agency worker, have an additional RTW burden as they have (in most cases) no longer a workplace to return to when sick-listed. In addition, these workers are characterised by an increased risk for (long-term) work disability compared to employees[36-41]. In the Netherlands, the risk of becoming long-term work disabled (> 18 months) with application for a disability benefit is three times higher for these workers compared to employees[41], accounting for 40% of the long-term disability claims received by the Dutch Institute for Employee Benefit Schemes[38]. Furthermore, in the past five years (2005-2010) the number of paid sickness benefits for sick-listed workers with flexible labour arrangements has doubled[40]. Also, vocational rehabilitation and RTW guidance for this group is unsatisfactory[41-43]. A recent cohort study in the Netherlands showed substantial

differences in RTW patterns, i.e. 9 months after the first day of reporting sick only 16% of the group of sick-listed unemployed workers and sick-listed temporary agency workers had attempted to RTW during the first 9 months, compared to 77% of the group of sick-listed employees[43]. Ten months after the first day of reporting sick only 8% of the group of unemployed workers and temporary agency workers were actually working (partially or fully), compared to 66% of the group of employees. Moreover, 27 months after reporting sick 71% of the group of sick-listed unemployed workers and sick-listed temporary agency workers had not resumed working at all, compared to 16% of the group of sick-listed employees[41].

Occupational health care for sick-listed workers without an employment contract in the Netherlands

Although in many countries sick-listing can only occur when an individual is (gainfully) employed, in the Netherlands the Sickness Benefits Act provides a social security safety net for sick-listed workers without an employment contract. After approval of the sickness benefit claim by the Dutch Social Security Agency (SSA) the sick-listed worker receives a supportive income, which equals maximally 70% of the last daily wage, with a ceiling at 189 Euros/day. Additionally, he/she is entitled to sickness absence counselling and vocational rehabilitation by a team of occupational health care (OHC) professionals of the SSA. Since there is no employer/workplace to return to, the SSA is responsible to facilitate RTW. Furthermore, the SSA is responsible for executing general obligatory OHC actions as dictated in the Dutch Improved Gatekeeper Act, for instance making a (medical) problem analysis and formulating a RTW action plan. Vocational rehabilitation is carried out by a team of OHC professionals from the SSA, consisting of an insurance physician, a labour expert, and a case-manager. The insurance physician of the SSA guides the worker according to the guidelines for OHC of the Netherlands Society of Occupational Medicine. He/she makes a problem analysis and advises the worker about recovery, e.g. health promotion and RTW options, and, if necessary, he/she can advise and refer the worker to work disability-oriented treatment, such as graded physical therapy. The labour expert is responsible for vocational rehabilitation support. Based on a

personal examination of the work abilities of the worker and expert knowledge of the labour market, the labour expert advises the worker with respect to RTW options, resulting in a RTW action plan. When the chance of work resumption in regular work without additional vocational rehabilitation support is viewed as slim, interventions such as referral to a vocational rehabilitation agency are offered to the worker. The case manager of the SSA monitors the vocational rehabilitation process to evaluate the progress. In case of an impeded (vocational) recovery/rehabilitation process the case manager consults with, and, if necessary, refers the worker to the insurance physician or the labour expert to identify and tackle the cause of this stagnation. This can lead to alterations in the vocational rehabilitation guidance. The OHC by the SSA ends when the insurance physician establishes full recovery of health and/or full work ability, i.e. no functional work limitations (with or without actual RTW of the worker). If the worker is still partially or fully work disabled after 18 months, then he/she can apply for a long-term disability benefit at the Dutch Institute for Employee Benefit Schemes (UWV). This is the same as for long-term sick-listed employees.

However, as already mentioned, the current vocational rehabilitation and RTW guidance for the group of vulnerable sick-listed workers without a (relatively permanent) employment contract is unsatisfactory. The aforementioned Dutch cohort study[41,43], showed the following figures when comparing a group of 9-month sick-listed workers without an employment contract with a group of 9-month sick-listed employees: 47% of the sick-listed workers without an employment contract reported having had no RTW guidance at all during the 9 months after reporting sick, compared to 14% of the employees. Only 22% of the sick-listed workers without an employment contract reported the making of a (medical) problem analysis, compared to 67% of the employees. In addition, 23% of the workers without an employment contract reported the making of a RTW action plan, compared to 63% of the employees. And, finally, 47% of the sick-listed workers without an employment contract reported having had no say in the proposed RTW actions versus 16% of the employees. Hence, there is an urgent need for OHC, including (cost-)effective RTW interventions, for these vulnerable workers without an employment contract or with a flexible, non-standard, labour agreement.

A theoretical approach to RTW of sick-listed workers without an employment contract

To date, a considerable amount of research has been done in the field of occupational disability. And although there is thus far no commonly adopted paradigm for RTW, many researchers in the field of occupational health have embraced the biopsychosocial model as theoretical framework[44]. Founded on the biopsychosocial model, the World Health Organization introduced the International Classification of Functioning, Disability and Health (ICF)[45]. The ICF model is an integrative approach proposing disability as a phenomenon resulting from a dynamic interactive process, in which impairment in bodily functions and subsequent development of functional limitations leads to restrictions at the participation level, all within the context of medical, personal, and external factors. From this perspective, work disability can be placed at the participation level. To further specify the external environment with regard to work disability and RTW, Loisel et al. proposed a transdisciplinary case management model, i.e. 'the arena of work disability'. This arena of work disability represents the actions of, as well as the interactions between, the main stakeholders in the occupational disablement process and the accompanying systems from within they act, i.e. the workplace system, the personal environment of an employee, the health care system, and the compensation system[46]. Notably, although in the biopsychosocial approach both disability and RTW are explained by a complex relationship among a variety of factors, operationalization of the decision-making process regarding sickness absence and work resumption is not embedded in the ICF model. However, from a psychological perspective, sickness absence and RTW are behaviours. The decision to be absent from work, i.e. to report sick, can thus be seen as a decision-making process based on several factors, commonly referred to as 'the threshold for absenteeism'[47-50]. This threshold is different for each individual, and is based on the following three factors: (1) the need to be absent, e.g. the presence of severe health complaints; (2) the desire to be absent, e.g. job satisfaction and organisational commitment; and (3) the opportunity to be absent, e.g. the presence of inhibitory measures, such as waiting days or wage penalties in case of sick leave abuse. Similarly, RTW can be viewed as a decision-making process. This is called 'the

threshold for RTW' and is based on: (1) the need to RTW, e.g. sufficient recovery from health complaints; (2) the desire to RTW, e.g. bonding with colleagues; and (3) the opportunity to RTW, e.g. access to social-medical guidance and the possibility of work adaptations. In figure 1 a conceptual model for work disability and RTW for a worker without an employment contract is presented. This model is adapted from the conceptual behavioural model for sickness absence and RTW, as proposed by Hooftman[51]. In line with the biopsychosocial approach, besides the effects of individual/personal factors, the effects of external factors are added to the model. Furthermore, to take into account the fact that the presence of a workplace is not self-evident for a sick-listed worker without an employment contract, having a bond with a workplace is added to the threshold for reporting sick, and the availability of a (therapeutic) workplace is added to the threshold for RTW. Additionally, based on the ICF model, improvement in functioning and restoring activities, as essential elements of (occupational) health care to achieve improvement in participation, i.e. RTW, are integrated in the model. Finally, with regard to the decision to RTW, a differentiation can be made, namely (1) the intention to RTW and (2) RTW behaviour. This distinction originates from one of the most influential models of behaviour change, the theory of planned behaviour or the derived ASE-model (Attitude, Social influence and self-Efficacy)[52-56]. According to this model the intention to RTW behaviour of a sick-listed worker is in itself influenced by attitudes (the positive and negative evaluation by the worker with respect to the expected outcome of RTW behaviour), social influence (beliefs of the worker about what others think of the RTW behaviour), and self-efficacy (belief of the worker that he/she is capable to RTW). Application of the ASE model for behaviour change has been extensively used for the development of health-related prevention programs[57-60]. Moreover, literature shows that the ASE model can also be applied in the field of OHC research[61-63]. As an underlying theoretical framework for achieving RTW behaviour, it can be used for the development of RTW interventions (Chapter 3).

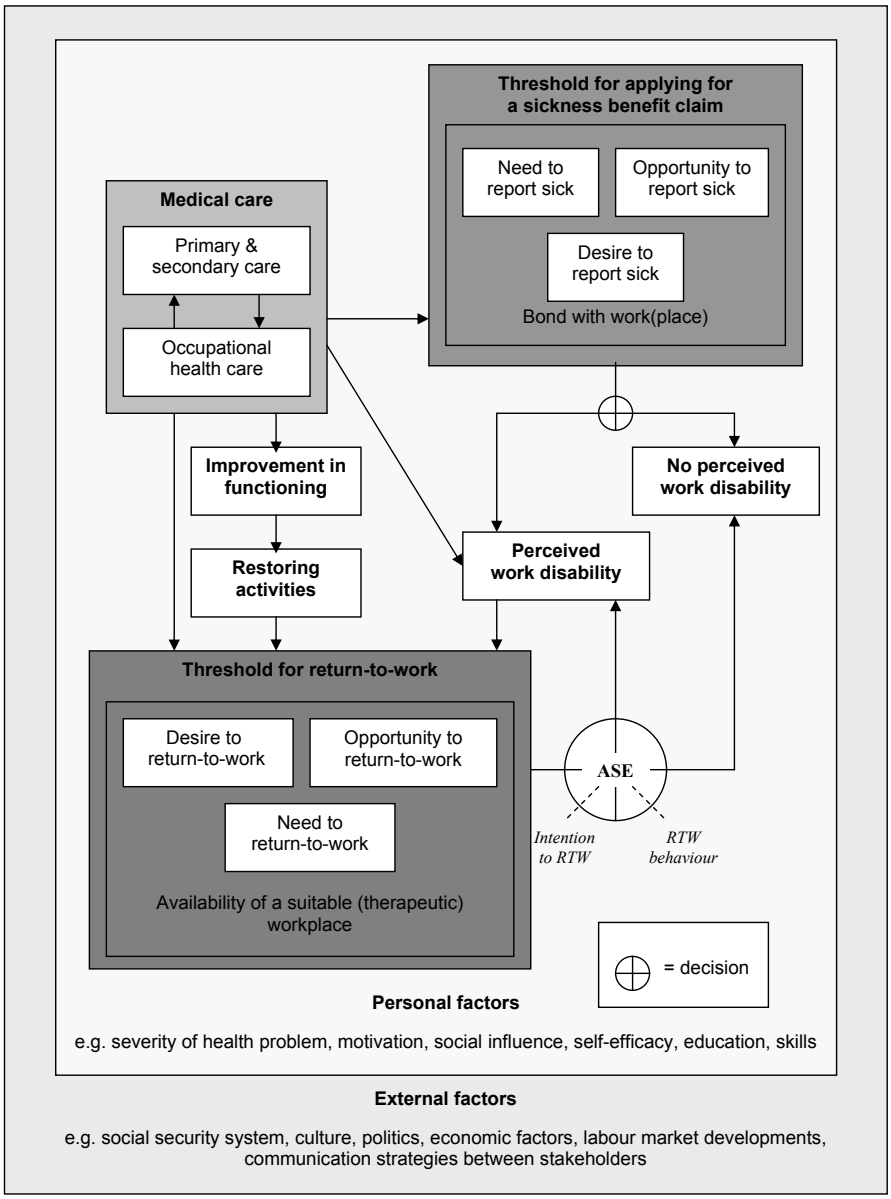

Figure 1. Conceptual model for work disability and RTW for a worker without an employment contract.

To further clarify, the afore-described conceptual model can be illustrated as follows: A 48-year old female worker with a low level education (=*personal factors*) has been working in several jobs as a temporary agency worker for the past two years. Since her divorce, approximately two years ago, she needs additional income as her alimony is not sufficient for household maintenance *(=external factor*). For the past three months she has been working fulltime as a factory worker in a food factory. This is physically demanding work with frequent lifting and carrying of heavy boxes. She would like to work as a shop assistant. However, due to her lack of work experience (=*personal factor*) and the presence of a national economical crisis (=*external factor*), it is difficult to find work, let alone finding suitable work that she wants to do. Since approximately two weeks she has a severe pain in the lower region of her back without radiation. Her general practitioner diagnoses her complaints as non-specific lower back pain. He prescribes pain medication and refers her to a physical therapist. Additionally, in view of the heavy work demands, he advises her to report sick (=*medical care*). She is not happy with her work in the factory and she has already thought about reporting sick. Being a temporary agency worker, she feels like an outsider at the factory (=*desire to report sick*). One week after visiting the general practitioner, the severe low back pain is still present and hinders her in all daily activities (=*need to report sick)*. Therefore, although she has two waiting days before she can receive sickness benefit (=*opportunity to report sick*), she decides to report sick at the Social Security Agency (SSA) (=*perceived work disability*). Because she is a temporary agency worker, the food factory where she worked has no legislative responsibilities to continue payment of wages during sick leave. In the Netherlands, the Sickness Benefits Act provides for sick-listed workers without an employment contract (=*external factor*). To approve her sickness benefit claim, she is invited to the consultation hour of the insurance physician of the SSA. During this consult she explains that the low back pain is still present. The prescribed pain medication and physical therapy have not (yet) helped to (sufficiently) relieve her back pain. Activities such as bending and lifting remain very painful. She explains to the insurance physician, that she is not able to do her work (=*perceived work disability*). The insurance physician advises her to stay active and to continue the physical therapy (=*improving functioning*) and to gradually resume her daily activities (=*restoring activities*). He makes a note in her medical file

that in case of persistent back pain with functional limitations during the follow-up consult, he will discuss referral to a graded activity program with her (=*occupational health care*). Three months later, she returns to see the insurance physician. The back pain has improved (=*need to RTW*) and she has been able to resume her daily activities. She has, however, not yet resumed working. Although she believes she is able to RTW (=*no perceived work disability*), finding a suitable workplace proves difficult. In order to gradually RTW, she would like to start with part-time work that is not psychically demanding. However, being a temporary agency worker this is not easy to realize (=*opportunity to RTW*). Also, the fact that she has to start in a new job with new colleagues and a new manager makes her somewhat reluctant to go job searching (=*desire to RTW*). The insurance physician wonders if OHC guidance of this worker can be improved.

Participatory interventions for RTW

Next to mental disorders, musculoskeletal disorders (MSD) are the second most common cause of work disability among both employees and workers without an employment contract in the Netherlands[64-66]. Furthermore, findings in the international literature show that workplace-based interventions are effective in reducing sickness absence among workers with MSD[29,67,68]. More specifically, participatory RTW interventions including a workplace component have shown to be effective on work-related outcomes for sick-listed employees with low back pain[69-71]. These participatory RTW interventions have their origin in participatory ergonomics (PE), which has traditionally been used to reduce work-related MSD in workplaces as a primary prevention[72]. Typical of PE studies is the formation of a team consisting of employees, managers, ergonomists, health and safety professionals, and research experts. By working together workplace conditions can be improved by active participation, by communication, and by consensus-based problem solving among all stakeholders involved. In a recent study in the Netherlands, Anema and colleagues showed that a participatory workplace intervention for RTW of employees with subacute low back pain, based on a successful Canadian participatory RTW program[69], was (cost-)effective compared to usual care[70]. This participatory

workplace intervention comprised of a structured stepwise process to identify and solve obstacles for RTW by the sick-listed employee and his/her supervisor, resulting in a consensus-based implementation plan to facilitate RTW. The proposed solutions for RTW can include aspects regarding work content, workplace, work organisation, work conditions, and/or work environment. Key element in the intervention was the presence of an independent RTW coordinator, who guides the process to achieve consensus. This participatory RTW program resulted in significantly earlier RTW, i.e. an average of 27 days. The estimated additional costs for one day earlier RTW, compared to usual care, were 19 Euros[73]. Also, compliance and satisfaction with the intervention were good for employees and OHC professionals. Furthermore, in another recent Dutch study, Lambeek and colleagues showed that an integrated care approach for sick-listed employees with chronic back pain (> 20 weeks of sickness absence), consisting of a participatory workplace protocol and a graded activity program, resulted in significantly earlier RTW, i.e. a median of 120 days earlier RTW during 12-month follow-up, compared to care as usual[71]. Economic evaluation showed that an additional 4 Euros needed to be invested in this integrated care program for one day earlier RTW. Furthermore, the return-on-investment for this integrated care intervention was estimated at 35 Euros[74], i.e. every Euro invested will return an estimated 35 Euros. However, as mentioned earlier, current RTW interventions are mostly workplace-based or contain at least a workplace component, which assumes the presence of a workplace to return to. Hence, RTW interventions specifically aimed at sick-listed workers without an employment contract, who have (in most cases) no workplace to return to, are rare[75]. This is in contrast to the fact that these type of workers represent a substantial and still growing part of the working population[33-35,39,76]. Therefore, in view of the aforementioned promising results with regard to the (cost-)effectiveness of a participatory RTW intervention for sick-listed employees with low back pain, it seems worthwhile to investigate the possibility of tailoring this participatory RTW program to the needs and the specific (societal and personal) context of sick-listed workers without an employment contract, e.g. temporary agency workers and unemployed workers. And, subsequently, to investigate the feasibility, the effectiveness, and the cost-effectiveness of such a newly developed tailor-made RTW intervention.

Aim of this thesis

This thesis describes the development of tailor-made OHC for the vulnerable working population who have no workplace to return to when sick-listed, i.e. workers without an employment contract. A participatory RTW program, including the possibility of a temporary (therapeutic) workplace, for temporary agency workers and unemployed workers, sick-listed due to MSD, is introduced.

The main objectives of this thesis are:

1. To develop a participatory RTW program for temporary agency workers and unemployed workers, sick-listed due to MSD.
2. To investigate the feasibility, the effectiveness, and the cost-effectiveness of this newly developed participatory RTW program for temporary agency workers and unemployed workers, sick-listed due to MSD.

The second chapter of this thesis concerns a sub-objective, namely:
To describe current OHC for sick-listed temporary agency workers and sick-listed unemployed workers in the Netherlands, and to examine the applied OHC interventions as possible determinants for RTW.

Outline of this thesis

This thesis is organized as follows: in chapter 2 the aforementioned sub-objective is addressed by cross-sectional data analyses of a large cohort of sick-listed workers without an employment contract who were, at baseline, at least 13 weeks sick-listed. In chapter 3 the first main objective is addressed, i.e. the development of a participatory RTW program for temporary agency workers and unemployed workers, sick-listed due to MSD, is described. The Intervention Mapping protocol was used to develop a theory- and evidence-based RTW intervention specifically tailored for temporary agency workers and unemployed workers, sick-listed due to MSD. To ensure participation and facilitate successful adoption and implementation, important stakeholders were involved in all steps of program development and

implementation. Results of semi-structured interviews and 'fine-tuning' meetings were used to design the final participatory RTW program (chapter 3). Next, in the chapters 4, 5, 6 and 7 the second main objective is addressed. In chapter 4 the design of a randomized controlled trial to investigate the (cost-)effectiveness of the newly developed participatory RTW program is described. Chapter 5 describes the effects of the participatory RTW program on sustainable RTW and health-related outcomes. The feasibility of the participatory RTW program is illustrated in chapter 6. The reach and implementation of the participatory RTW program, the satisfaction and experiences of all stakeholders involved, and the perceived barriers and facilitators for implementation of the participatory RTW program in daily practise are presented. Chapter 7 describes the cost-effectiveness of the participatory RTW program for temporary agency workers and unemployed workers, sick-listed due to MSD, after 12-months of follow-up. Finally, chapter 8 presents the general discussion.

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