DOCTORAL THESIS NO.41

# Return to work after long-term sick leave for common mental disorders

*Women's beliefs, intentions, health and psychological well-being*

Åsa Hedlund

UNIVERSITY OF GÄVLE

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*“All our science, measured against reality, is primitive and childlike - and yet it is the most precious thing we have."*

*Albert Einstein*

# Abstract

**Background:** Long-term sick leaves due to common mental disorders (CMDs) are common in Sweden today, especially among women. Return-to-work (RTW) support usually includes work-related factors and treatment for the CMD. Despite this, the way back to work is often long with an increased risk of relapse into sick leave afterwards. The overall aim of this thesis was to generate knowledge about women's RTW after long-term sick leave for CMDs by investigating their beliefs, intentions, perceived health and psychological well-being.

**Methods:** Study I reported on the development and psychometric evaluation of the RTW Beliefs Questionnaire based on the Theory of Planned Behaviour (TPB). It contain items about attitude towards, social pressure to, perceived behavioural control over, and intentions to RTW. Study II was a cross-sectional study investigating determinants (RTW beliefs and perceived health) of RTW intentions. Study III was a 1-year follow-up investigating predictors of RTW and psychological well-being. Study IV was a qualitative study describing women's health and psychological well-being in the RTW process from women's and first-line managers' perspectives.

**Results:** Beliefs about RTW mainly concerned health, psychological well-being, the work situation and relations in private life. The RTW Beliefs Questionnaire showed varied psychometric qualities and a distinct division between work and private life. Women with a more positive attitude, stronger social pressure and higher perceived behavioural control had stronger RTW intentions. The follow-up showed that the only predictor of having RTW one year later was stronger RTW intentions at baseline. However, these intentions were not associated with higher psychological well-being. In the qualitative study, women's health and psychological well-being were described to be dependent on the individual characteristics of the women themselves, their private life, work and RTW stakeholders.

**Conclusions:** Women's RTW after long-term sick leave for CMDs concerned three core aspects: Private-, personal- and work-related. It is important that RTW is compatible with good health and high psychological well-being and that health promotion continue after the end of sick leave. Future studies in the area should consider private life aspects in addition to personal- and work-related aspects.

**Keywords:** Beliefs, Common mental disorders, First-line managers, Health, Intentions, Long-term sick leave, Psychological well-being, Return to work, Women

# Sammanfattning

**Bakgrund:** Långtidssjukskrivningar för psykisk ohälsa är vanliga i Sverige idag, särskilt hos kvinnor. Stöd i återgången till arbete inkluderar vanligtvis arbetsrelaterade faktorer och behandling för psykisk ohälsa. Trots detta är vägen tillbaka till arbete ofta lång med en ökad risk för återfall i sjukskrivning efteråt. Det övergripande syftet med denna avhandling var att generera kunskap om kvinnors återgång i arbete efter långtidssjukskrivning för psykisk ohälsa genom att undersöka deras föreställningar, intentioner, upplevda hälsa och psykiska välbefinnande.

**Metod:** Studie I beskrev utvecklingen och psykometrisk utvärdering av RTW Beliefs Questionnaire baserat på Theory of Planned Behavior (TPB). Det innehåller frågor om attityd till-, social press till-, upplevd kontroll över- och intention till att återgå i arbete. Studie II var en tvärsnittsstudie som undersökte faktorer (föreställningar om att återgå och upplevd hälsa) relaterade till intentionen att återgå. Studie III var en 1-årsuppföljning som undersökte prediktorer för återgång och psykiskt välbefinnande. Studie IV var en kvalitativ studie som beskrev kvinnors hälsa och psykiska välbefinnande under återgångsprocessen ur kvinnornas och första linjens chefers perspektiv.

**Resultat:** Föreställningar om återgången gällde främst hälsa, psykiskt välbefinnande, arbetssituationen och relationer i privatlivet. RTW Beliefs Questionnaire visade på olika psykometriska egenskaper och en distinkt uppdelning mellan arbete och privatliv. Kvinnor med en mer positiv attityd, starkare social press och högre upplevd kontroll hade starkare intention till att återgå. Uppföljningen visade att den enda prediktorn för återgång ett år senare var starkare intention vid baslinjen. Denna intention var dock inte associerat med ett högre psykiskt välbefinnande. I den kvalitativa studien beskrevs kvinnors hälsa och psykiska välbefinnande vara beroende av kvinnornas individuella egenskaper, deras privatliv, arbete och samhällsaktörer.

**Slutsatser:** Kvinnors återgång efter långtidssjukskrivning för psykisk ohälsa rörde tre kärnaspekter: Privata, personliga och arbetsrelaterade. Det är viktigt att återgången är förenlig med en god hälsa och högt psykiskt välbefinnande och att främjandet av hälsa fortsätter även efter att sjukskrivningen har avslutats. Framtida studier inom området bör ta hänsyn till privatlivsaspekter utöver personliga och arbetsrelaterade.

**Nyckelord:** Föreställningar, Första linjens chefer, Hälsa, Intention, Kvinnor, Långtidssjukskrivning, Psykisk ohälsa, Psykiskt välbefinnande, Återgång till arbete

# Förord

En sådan här resa görs inte ensam. Jag vill börja med att tacka mina handledare Annika Nilsson, Marja-Leena Kristofferzon och Eva Boman. Tack vare er värme, klokhet, kunskap och humor har jag känt mig trygg hela vägen och det har varit värt allt! Annika, min huvudhandledare, du är en fantastisk ledare och människokännare. Det är en svår konst att lära någon flyga, men du kan den. Jag kommer aldrig kunna tacka dig tillräckligt för allt du givit mig. Du brukar dock säga att man tackar genom att ge vidare, inte genom att ge tillbaka, och det lovar jag att försöka göra allt vad jag förmår. Marja-Leena, din förmåga att se avvikelser in i minsta detalj är nästan övernaturlig. Det finns ingen logikbrist eller felaktig siffra som undgår dig. Tack även för alla intressanta samtal. Eva, vad hade vi gjort utan dig? Du är den som har fått oss att tänka i nya perspektiv och kliva ur hjulspåret vi har fastnat i. Tack! Jag vill också tacka Karen Nieuwenhuijsen för att du ville samverka med oss i den fjärde studien, och för att du och dina kollegor tog emot mig med varm famn på Amsterdam UMC under våren 2023.

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# List of Papers

This thesis is based on the following papers, which are referred to in the text by Roman numerals.

**Paper I**
Hedlund Å, Boman E, Kristofferzon ML, Nilsson A. Development and psychometric evaluation of a theory-based questionnaire measuring women's return-to-work beliefs after long-term sick leave for common mental disorders. *Work*. 2023;76(1):109-124. doi: 10.3233/WOR-220301.

**Paper II**
Hedlund Å, Kristofferzon ML, Boman E, Nilsson A. Are return to work beliefs, psychological well-being and perceived health related to return-to-work intentions among women on long-term sick leave for common mental disorders? A cross-sectional study based on the theory of planned behaviour. *BMC Public Health.* 2021 Mar 19;21(1):535. doi: 10.1186/s12889-021-10562-w.

**Paper III**
Hedlund Å, Nilsson A, Boman E, Kristofferzon ML. Predictors of return to work and psychological well-being among women during/after long-term sick leave due to common mental disorders - a prospective cohort study based on the theory of planned behaviour. *Health and Social Care in the Community.* 2022 Nov;30(6):e5245-e5258. doi: 10.1111/hsc.13943.

**Paper IV**
Hedlund Å., Kristofferzon M-L, Boman E, Nieuwenhuijsen K, Nilsson A. Women's health and psychological well-being in the return-to-work process after long-term sick leave for common mental disorders: Women's and first-line managers' perspectives. Resubmitted to *BMC Public Health 2023-12-08.*

# Abbreviations

| | |
|---|---|
| CMDs | Common Mental Disorders |
| RTW | Return to Work |
| TPB | Theory of Planned Behaviour |

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# Introduction

Throughout the years I have seen friends, colleagues and patients trying to return to work after long-term sick leave for common mental disorders. Some of them have been successful, some of them not. I have also been there myself, struggling to regain my life in the company of panic attacks and lack of sleep. It has always seemed like long-term sick leaves due to common mental disorders are everywhere, and that return to work is often both complex and prolonged, even though there are different kinds of support along the way. As I have always had an interest in people's health and well-being and how our current society influences this – hence my choice to become a primary care nurse – I often have wondered what this is all about. When I got the opportunity to investigate this topic more deeply, I took it. In June 2019, I was accepted as a PhD student at the University of Gävle. I thought maybe investigating this from a caring science perspective could contribute some valuable knowledge to the field. With my 'caring science eyes', I wanted to be open to the women's entire life situation by examining their own perspective on return to work after long-term sick leave for common mental disorders. Is there something we are missing?

# Background

## Return-to-work definitions

The word "return" means to come back to a previous condition and/or place (1). Return to work (RTW) refers to coming back to work, the same job as before or another one, following an absence, such as sick leave. In the RTW research, two main concepts are used: RTW (behaviours) and RTW process (the timeline in which the behaviours occur). RTW involves a series of behaviours that entail progress towards the end of sick leave or to a certain time beyond (2,3). Examples are work resumption (start working), increasing the degree of working time or staying at work for a certain amount of time (2). These behaviours occur during the so-called RTW process, which is described as ranging from the period of sick leave through a gradual return to sustainability at work (4–6). There is no consensus regarding when the RTW process ends, but Young et al. (5) suggested that it ends when the employee is able to perform satisfactorily, maintain employment and is able to make progress in his/her career and when all involved RTW stakeholders are satisfied. RTW, i.e., making progress in the RTW process, can be complex for individuals with common mental disorders (CMDs) because it depends on both internal conditions, such as cognitions and health, and external conditions, such as the working situation and the employer support (3,7–9). Time to RTW can vary depending on personal- and work related factors (10) and relapses into sick leave are common during the first years after the sick leave, both internationally and in Sweden (11,12). This means that the RTW process is often unpredictable and non-linear in nature.

In this thesis, return to work (RTW) is defined as different behaviours such as work resumption, increased working degree, or staying at work. These behaviours, which are in focus in this thesis, occur during the RTW process. The latter is in focus only in the last study. In all four studies, RTW is in relation to long-term sick leave for common mental disorders (CMDs).

## Common mental disorders

Common mental disorders (CMDs) are commonly occurring worldwide (13–16). Only in Europe, around 84 million people are affected (15). CMDs are usually considered to include depression and anxiety (13), and sometimes also stress-related disorders (8). Stress-related disorders consist of, for example, exhaustion disorder and acute stress reaction while anxiety syndromes consist of, for example, generalized anxiety syndrome or panic syndrome (17). CMDs cause human suffering and are a great economic burden for societies (18). Women are reported to constitute a majority of those affected, both internationally (13,15) and in Sweden (19). In Sweden, over 90% of all mental illness

is due to CMDs (20), among which stress-related disorders are the most common (19). Symptoms are similar to everyday experiences such as sadness or stress, but are more persistent and entail difficulties in managing private and/or working life (20,21). They can vary in severity and be both mental and physical, for example loss of interest and joy, decreased overall energy (20,22,23), sleeplessness (23), worries (17,20), panic and heart palpitations (17,24). Comorbidity across diagnoses within CMDs is common (20,25,26), and there is an increased risk of somatic conditions as well (20). The diagnosis is primarily determined via the person's subjective experience of how he/she feels (20), because it is often difficult to find objective signs of CMDs. Reasons for the disorders are believed to be an interplay between the individual's biology and external events/situations (15,21,23,24), with an emphasis on the latter (19,27).

In Sweden, most seek and are treated in primary care (20). What kind of treatment is given, and by which professions, depends on the reason for the CMD and its severity, but also on the caregiver's available resources (28). Treatment often includes psychological therapy (20,22), medicines (20), reduction of stressors and/or support to change one's lifestyle (22). The aim is to improve health and well-being so that the individual can function in daily life, and being able to work is one important aspect of this (20). However, despite treatment, some symptoms usually persist for a long time (22,29). This can partly be due to lack of evidence regarding what treatment is best for stress-related disorders (28).

CMDs are common causes of sick leave globally (30–34), and compared to men, women are more often on sick leave and for longer periods (19,30,35). Sweden is no exception, where CMDs account for around half of all ongoing sick leaves (36), making them the most common cause of long-term sick leaves (>2 months) in Sweden, where women constitute a majority (19).

In this thesis, common mental disorders (CMDs) are defined as stress-related disorders and/or depression and/or anxiety disorders.

## Long-term sick leave

Long-term sick leave is usually defined as more than 1-3 consecutive months of sickness absence from work (19,37–39). Because of differences in the welfare systems and establishment of registers in different regions in the world, it is difficult to make global comparisons of sick leave length, causes and frequencies (34). The Organization for Economic Cooperation and Development (OECD), however, describe three different welfare models: the socio-democratic model, the liberal model and the corporatist model (40). The first model is the most generous and accessible with well-developed support systems. Sweden, Norway and the Netherlands are examples of countries that apply this model, which is why they struggle with similar challenges, such as long-term sick leaves (35,41,42). Uniquely for Sweden, the time limit for sick leave was eliminated in 2016 (43), which means that an individual can be on sick leave for an unlimited amount of time. This is, however, rarely the case, because

there are breakpoints (e.g., after 90 days and 180 days) at which the Social Insurance Agency assesses, using stricter rules the longer time has passed, whether or not the individual is entitled to continued sick leave benefits (funded by taxes), and to what degree (25, 50, 75 or 100%) (44). Their assessment is based on a medical certification from a physician, where the employee's diagnosis, function and activity limitation related to the illness are described (45).

Sick leave should not be used solely as income loss insurance. It is also a treatment (37,46). During sick leave, stakeholders collaborate to support RTW. Central stakeholders, both internationally and in Sweden, are the employee him-/herself, employers (e.g., first-line managers, occupational health care and human resources), insurers (in Sweden the Social Insurance Agency), union representatives, healthcare professionals (e.g., physicians, psychologists, nurses, physiotherapists) and RTW coordinators (47–50). Collaboration is important because stakeholders have different areas of responsibility, complement each other's knowledge (51) and aim to take a holistic view of the situation (49,51). However, this is not always easy because of, for example, a mismatch in expectations of each other (52–54).

In Sweden, the risk of sick leave due to CMDs is highest among women between 30-39 years with young children at home (19). However, those who end up in long-term sick leave are usually slightly older, i.e., between 36 and 45 years (55). The reason for sick leave is described to be multifaceted, i.e., both work life (e.g. poor working conditions) and private life (e.g. caring for a family member) have an impact (56,57). There is a strong relationship between working conditions and sick leave due to CMDs (58). Sick leaves for CMDs are most common within female-dominated occupations such as healthcare, social services and schools (59–61). These jobs have particular shortcomings and stressors (59,62), for example emotional stress (57,62,63), high demands regarding production in relation to available time (64), communication in vulnerable situations (65), understaffing (27), low control (62), shift work (66), few resources (62,67) and more employees per manager than in, for example, technical professions (62).

Long-term sick leave has negative consequences for society and the individual. For society, long-term sick leaves entail large costs but also loss of valuable competence in welfare professions (19). For the individual, social life/relations outside work (68–72), psychological well-being (69), self-esteem and self-image (68) can be negatively affected. The probability of RTW decreases with time (73), and there is a risk of becoming permanently excluded from the labour market (12). Despite this, the motivation to get back to work might decrease during the sick leave period because life has been adapted to the sick leave situation (71,74). Also, women can have expectations placed on them to take the main responsibility for the household despite being on sick leave, or *because* they are on sick leave (now that they have more time) (72,75). This can result in not getting the rest they need (75), causing a negative spiral. However, sick leave for a CMD can also be perceived by women as an opportunity to find the right path in life, for example find a job that suits them better (68).

Research about RTW after long-term sick leave for CMDs has mainly been conducted in the Netherlands and Scandinavia and is presented below.

## What matters for return to work?

As seen above, being able to RTW after long-term sick leave for CMDs is often more complex than just "being cured" of the disorder. In fact, commonly described facilitators of RTW among employees on sick leave for CMDs are individually adapted adjustments at work and understanding on the part of others (7,76). Described barriers, on the other hand, are mainly health problems, high demands at work and poor relationships at work (7,68,76–78). Quantitative studies (or reviews based on quantitative studies), in turn, have shown that predictors of RTW are mainly demographic (e.g., lower age, higher socioeconomic status and male gender) (3,8,79,80), health-related (e.g., lower symptom burden and better perceived health) (8,79–82), cognitive/personality-related (e.g., positive expectations, conscientiousness and high self-efficacy) (8,80,82,83), and work-related (e.g., high work ability, job control and low demands) (8,79,84–86). Number of previous sick leave episodes is a well-known predictor as well (the more previous episodes – the less successful RTW) (3,8,87). Moreover, research has found that high work-home interference prolongs RTW after sick leave for CMDs (84). Therefore, factors of importance for RTW might differ between genders because women experience higher strain at home during the RTW process (75,88).

Many interventions to promote an earlier RTW has been conducted both internationally and in Sweden. Based on a summary of these interventions, early multiprofessional and multicomponent evaluations and actions focusing on a combination of health and work-related aspects seem to be important (89–93). However, the evidence concerning effective RTW-interventions after long-term sick leave due to CMDs is still weak (37,90,94). There are different possible ways to enhance the evidence, for example by repeating the interventions already conducted, having more consistent outcomes, doing theory-based research, focusing on specific groups (e.g., women) and specific countries (because the contexts differ), as well as conducting interdisciplinary research to capture the totality and complexity of RTW (37,94).

Recent Swedish interventions have focused on, for example, problem-solving in primary healthcare with workplace involvement (95), digital RTW support (96,97), supported employment, i.e., "place-then train" (94), and interventions that involve staying elsewhere, away from home, for a while (98,99). It is, however, too early to say anything about the effectiveness of these interventions.

One thing considered to be certain is that the employer, especially the first-line manager, needs to be involved for a successful RTW. This role is described in more detail below.

## The first-line manager – a key stakeholder

The first-line manager is a particularly important RTW stakeholder both internationally and in Sweden. The terms used to refer to first-line managers differ.

For example, the terms employer (100), supervisor (52) or simply managers (49) are often used in international research. In this thesis, we use the term "first-line manager" because that corresponds to the Swedish system. This is the manager who works closest to the employees and is responsible for staffing, budget, work environment, organizational development and work support during the RTW process (101,102). Because the first-line manager works so closely with the returning employee, his/her attitude towards CMDs (68) and the support he/she gives in the RTW process (3) affect the employee's ability to RTW. In Sweden, the first-line manager is obligated to promote a good work environment and health for the employees (103) and expected to look for signs of an unhealthy workload and take actions to prevent ill-health (103). If the employee is expected to be on sick leave for more than 60 days, the manager is obligated to set up a plan for RTW together with the employee (47). This plan should contain the necessary, and possible, adjustments at work for that employee, and which of the other RTW stakeholders need to be involved. Hence, the support given can differ from case to case and from workplace to workplace. When the employee is no longer on sick leave, the manager's responsibility for the vocational rehabilitation ends (104).

There is not much research on RTW after long-term sick leave for CMDs from first-line managers' perspectives, but the existing research, both internationally and in Sweden, shows that their role is challenging. For example, they have described feeling alone in their role (54), a lack of knowledge about CMDs during the RTW process (52,54,105,106) and that factors beyond their control affect the employee's ability to RTW, such as the quality of collaboration with other stakeholders and the employee's private life and attitude towards RTW (105). They also report experiencing cross-pressure, i.e., living up to their managers' expectations, supporting the returnee and at the same time creating a good work environment for co-workers (106).

In addition to support from the workplace, the employee's own beliefs also matter for RTW, and these are described below.

### Return to work beliefs

Employees' own perceptions and cognitions regarding RTW have received increased attention over the years (107). This probably has its roots in the increased awareness of person-centred care, the importance of the individual´s own perspective (107–109) and that the general view on disability has moved from a biomedical to a biopsychosocial one (37). However, employees' own perspectives on RTW after sick leave for CMDs has often been restricted to experiences and feelings in the RTW process (7,78,110). Beliefs, however, are especially interesting to investigate because they are closely related to the performance of behaviour (111–113). The need for more knowledge about RTW beliefs has been highlighted in recent research, the goal being to increase the evidence (107). Different definitions of the concept of belief can be found throughout the literature. For example, belief has been defined as when we take something to be the case, regard it as true, a perception, an attitude, a mental acceptance, the subjective probability of something or held convictions

(111,112,114–116). Beliefs can concern something in the past, in the present or in the future, and they can influence not only behaviour, but also feelings and decisions (115). They are considered to be shaped by, for example, our cultural role in society, such as the gender we belong to (117).

Questionnaires that measure RTW beliefs (i.e. individuals beliefs about their own RTW) do exist, but relatively few aspects have been targeted. The focus has mainly been on the individuals expectation concerning how much time it will take to RTW (83) and RTW Self-Efficacy (118–120). Other measured RTW beliefs are for example perceived obstacles to RTW (120) and readiness to RTW (121). The questionnaires have limitations regarding individuals on long-term sick leave after CMDs. For example, RTW expectations lack a theoretical basis and are measured inconsistently (83). The RTW Self-Efficacy scale certainly rests on a solid theoretical ground but may not alone be able to explain the complexity of RTW after long-term sick leave for CMDs. The Readiness for Return to Work Scale has shown poor psychometric properties in a Scandinavian context (122). Overall, existing measurement of RTW beliefs does not reveal what underlies them, which makes them difficult to influence in interventions (83,120,123). To be able to increase the understanding of women's RTW after long-term sick leave for CMDs, there is a need for a broader and deeper measurement of RTW beliefs. Preferably theory based.

## The Theory of Planned Behaviour – linking beliefs to behaviour via intentions

The Theory of Planned Behaviour (TPB) was developed during the 1980s by the psychologist Icek Ajzen, as an extension of the Theory of Reasoned Action, to increase the predictive power regarding behaviours over which individuals lack complete volitional control (124). For decades, it has been an influential model used for predicting and explaining different kinds of human behaviour (124,125), often health related (126,127). The theory (Figure 1) assumes that individuals, consciously or unconsciously, consider the consequences of their actions before performing them. The general idea is that performance of a behaviour is dependent on the intention to perform the behaviour, which in turn is determined by the individual's attitude towards, social pressure (subjective norms) to, and perceived behavioural control over the behaviour (124,128,129). Attitude is the degree to which an individual has a favorable/unfavorable appraisal of the behavior. Subjective norms is the perceived social pressure to perform/not perform the behaviour, and perceived behavioural control is the perceived ease/difficulty of performing the behaviour (124). These determinants are based on the behavioural-, normative- and control beliefs individuals have about the behaviour (130). Ajzen defined beliefs as the subjective probability of something (e.g., that is or that will happen) (112,130). The beliefs are not chosen voluntarily, because they are formed by our experiences and the information we receive from our environment. What, and the strength of, beliefs the information leads to is largely dependent on the source (e.g., trustworthiness or likeability), message factors (e.g., order of ar-

guments) and personal factors in the individual him-/herself (e.g., gender, intelligence or self-esteem) (112,130). People are not necessarily rational, neither are their beliefs assumed to be factually correct. Nevertheless, people are assumed to be guided by their beliefs (130).

Overall, the theory assumes that the more positive the attitude, the stronger the social pressure and the stronger the perceived behavioural control, the stronger the intention to perform the behaviour and – consequently – the greater the probability of actually performing the behaviour (124). Intention is defined as how hard individuals are willing to try, or how much effort they are planning to put into performing the behaviour (124). Behaviour, in our case RTW, is defined as an observable act (112). It is important to keep in mind that, for a behaviour to occur, the individual must also have *actual* control over the behaviour (not only *perceived*), i.e., the necessary resources such as time, skills or cooperation from others (130).

Attitude, social pressure and perceived behavioural control should be measured both indirectly and directly. The indirect measures aim to capture the target group's behavioural, normative and control beliefs about the behaviour, and are specific, e.g., "my health will deteriorate if…/my partner wants me to… ". The direct measures are generally formulated (e.g., it will be bad for me to…/other people want me to…). The indirect measures are determinants of the direct measures (130). Items for indirect measures are created from interviews with the target population at the current time and in a relevant context. This is the reason why there are no standard questionnaires based on the TPB (130). Attitude, social pressure and perceived behavioural control are conceptually independent, but often empirically correlated (128,130).

Because of similarities in items, indirect and direct measures have the overall name "RTW beliefs" in this thesis.

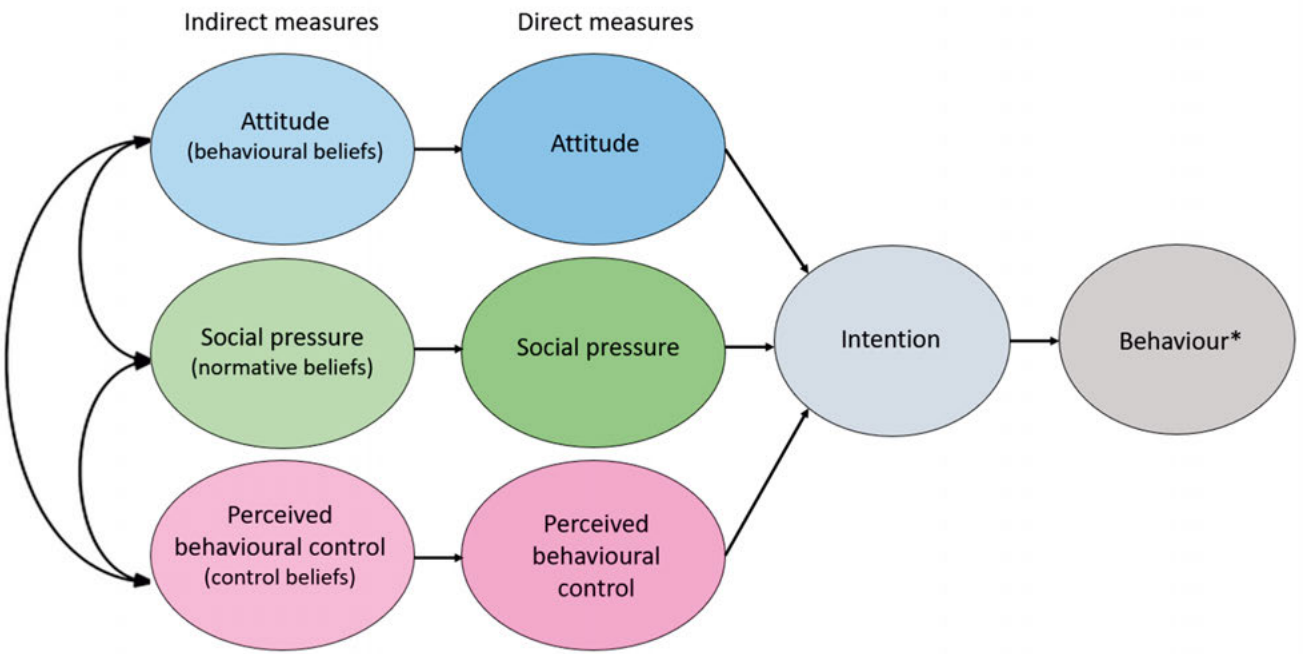


**Figure 1.** The Theory of Planned Behaviour. Figure inspired by Ajzen (128) and Francis et al. (129).

*In this thesis: Return To Work

A few studies have used the TPB in relation to RTW, and none in a Swedish context. However, to my knowledge, only Dunstan et al. (131) developed the scales based on the TPB and used both indirect and direct measures. In this study, the TPB was successfully applied among employees with musculoskeletal disorders (131). Brouwer et al. also applied the theory among employees on sick leave (132,133), and even carried out a subgroup analysis with only employees with CMDs. However, the authors did not base the questionnaires on the theory. For example, the perceived behavioural control scale was exchanged with a general self-efficacy scale, and there were no indirect measures at all. Nevertheless, the results showed that willingness (similar to intention) to RTW was significantly associated with earlier RTW (working the same number of hours as in the work contract) among employees with CMDs (132).

Even though the assumption is that intention mediates the effect of beliefs on behaviour, it is common praxis to use the direct measures of attitude, social pressure, and perceived behavioural control as direct predictors of behaviour. Brouwer et al. (132) applied this to RTW and found that attitude, social pressure and self-efficacy were direct predictors of earlier RTW (working the same number of hours as in the work contract) after long-term sick leave for various conditions, including CMDs.

To increase the explanatory power, Ajzen suggested including additional variables in the TPB model (124). These additional variables should be independent of the original determinants, be possible to consider as a determinant of intention or the behaviour and be hypothetically relevant to the behaviour (130). For this thesis, we chose health and psychological well-being as additional variables.

## Health

The word health has its roots in the old English word "hale", which means being whole or sound (134). Good health among people is one of the United Nations' global goals for sustainable development (135) and also central in caring science (109,136–138). Health is difficult to distinguish from general well-being. They are often used together to form the concept "health and well-being", like synonyms (109,137,139,140), without stating what is what, but together representing how a person feels and functions overall. From the traditional biomedical perspective, health is viewed in a reductionistic way, i.e., as the same as absence of disease (109,141). However, the view of health as more than absence of disease has evolved over time and has been more and more accepted as a common view by different disciplines, such as nursing (109,137,142), psychology (141) and sociology (143). Because of this, today health is often viewed as a subjective feature, i.e., that individuals' own perception of their health is of more interest than others' perceptions of it (109,136,137). It has actually been shown that, regarding morbidity and mortality, individuals' perceived health is as important as, or even more important than, objective health measures (144,145).

In caring sciences, there is a holistic view of health. This means that health is based on the whole life world of a human being (136,137) as perceived by

the individual him-/herself (109). It is about how one "generally feels" regardless of presence of disease (109,136,137). Disease is, however, a threat to good health (109,136). Health is a continuous process rather than a dichotomous feature (109). It has been described in terms of balance and function, for example, one's own perception of adaption to the environment, ability to perform roles in life (109,141), perceived internal homeostasis (109) or equilibrium (136). Ekebergh (136) summarized good health and meant that it means feeling well enough to not to have to think about how we feel, i.e., that daily life goes on without feeling hampered by illness (136). Therefore, it is a resource in life (137).

Individuals on sick leave for CMDs have reported decreased health (146–148). The longer the sick leave, the worse the health (148). On the other hand, better health has been found to be a significant predictor of earlier RTW after long-term sick leave among employees with CMDs (146,147) and is important to promote to regain workability (149). There are, however, findings that make the picture more complex. One finding is that health is not as important for RTW as type of job (148), perceptions, feelings and cognitions are (37). Furthermore, the job itself can actually contribute to better health, especially if the cause of the CMD is private in nature (78). Nevertheless, much is still unknown regarding health in relation to long-term sick leave and CMDs, for example how it changes over time and why, in the RTW process.

In this thesis, health is seen as a subjective, continuous, changeable, and global resource that concerns how the individual generally feels and functions in daily life.

## Psychological well-being

Just like good health, high well-being among people is one of the United Nations' global goals (135). One dimension of well-being that is especially relevant regarding this thesis is psychological well-being, sometimes called "mental well-being" (150), "emotional well-being" (151,152) or even "mental health" (153,154). This concept is relevant to different disciplines within human research, such as caring sciences, but has its roots in psychiatry and psychology. According to research, psychological well-being is influenced by health (155,156), but is nonetheless a distinct feature. Leading health authorities in Sweden have agreed on a definition of psychological well-being as being at the opposite end of a continuum to mental disorders (157). They defined psychological well-being as being able to cope with difficulties in life, feeling satisfied with life, feeling positive emotions and being able to develop one's potential. Similar descriptions can be found in international sources, i.e., that psychological well-being spans from a state of psychological distress to positive emotions such as happiness, meaning, satisfaction and feeling competent (158–161). Research has shown that long-term sick leaves are associated with lower psychological well-being (69) and that a higher symptom burden caused by the CMD delays RTW (8). On the other hand, symptom improvement is not

enough for an earlier RTW (90,93,94) and an early RTW does not automatically mean that the employee has high psychological well-being (162).

The interest in psychological well-being at work after RTW as a topic is increasing (163,164). This is because high psychological well-being at work is likely to increase the chances of sustainability at work after RTW (164). For example, it is perceived to make it easier to cope with pain symptoms at the workplace among employees with musculoskeletal disorders (165). Generally, high psychological well-being at work has been seen to be connected to a series of work-related positive outcomes such as stronger work engagement (166), lower intention to leave one's job (167) and better work performance (168). Regarding RTW after sick leave for CMDs, there is almost no research about psychological well-being at work. However, in Joosen et al.'s study (7), employees on sick leave for CMDs said that having fulfilling work tasks was a facilitator of RTW, thus providing some indication of the importance of psychological well-being at work in relation to CMDs.

In this thesis, psychological well-being is defined as a continuous feature ranging from a state of psychological distress (which can mean presence of CMDs) to a positive psychological state where the individual is not only free from the distress/CMD, but also can flourish. Psychological well-being can concern life as a whole or specific areas in life such as work life.

# Rationale

In summary, RTW after long-term sick leave for CMDs is complex and more knowledge is needed in the area. A multiprofessional and multicomponent approach is more successful than a narrow focus. However, an effective method for promoting RTW has not yet been found. There are some ways to increase the amount of evidence, for example, investigating previously overlooked aspects, applying a gender-specific approach, and basing the research on theory. Generally, employees' RTW beliefs, perceived health and psychological well-being are important to RTW. However, less is known about these in relation to CMDs, especially among women. Because women often experience higher strain both at work and at home, which likely affect their cognitions and feelings, it is important to focus on them. By turning to the women themselves, and also to first-line managers, previously overlooked aspects of importance for RTW among women after long-term sick leave due to CMDs may be identified. Furthermore, using the TPB as a framework makes it possible to generate knowledge based on solid theoretical grounds.

# Overall and specific aims

The overall aim of this thesis was to generate knowledge about women's RTW after long-term sick leave for CMDs by investigating their beliefs, intentions, perceived health and psychological well-being.

### *Study I*

The aim was to describe the development (Phase 1) and evaluation of psychometric properties (Phase 2) of a questionnaire designed to measure RTW beliefs among women on long-term sick leave for CMDs.

### *Study II*

The aim was to identify associations between RTW beliefs, psychological well-being, perceived health and RTW intentions among women on long-term sick leave due to CMDs and to do so using the Theory of Planned Behaviour as a theoretical base.

### *Study III*

The aim was to examine whether RTW beliefs and perceived health were predictors of RTW and psychological well-being among women during or after long-term sick leave for CMDs, based on the Theory of Planned Behaviour.

### *Study IV*

The aim was to describe experiences of women's health and psychological well-being in the RTW process, from women's and first-line managers' perspectives.

# The studies

## Designs and a brief overview

The thesis includes four empirical studies using different approaches and designs. An overview of the studies is presented in Table 1. Study I-III were directly based on the TPB, and different parts of the theory were investigated in different studies. Study 1, questionnaire development and testing, was the basis for Study II and III. Study IV aimed to reach a deeper understanding of women's health and psychological well-being in the RTW process. All studies included women who were and/or had been on long-term sick leave for CMDs. The samples were similar in all studies, i.e., stress-related disorders were the most commonly reported diagnoses, and the most common professions were within healthcare, social services and schools. In addition, first-line managers were included in Study IV.

**Table 1.** Description of studies I-IV

| Study | Design | Participants | Data analysis |
|---|---|---|---|
| **I** *Phase 1* | Questionnaire development | Women (n=20) after long-term sick leave for CMDs | Qualitative content analysis |
| *Phase 2* | Psychometric evaluation | Women (n=282) on long-term sick leave for CMDs | Reliability and validity tests |
| **II** | Quantitative Cross-sectional | | Multiple linear regression analysis |
| **III** | Quantitative, cohort study with a prospective design | Women (n=162) after long-term sick leave for CMDs | Multiple logistic and linear regression analyses |
| **IV** | Qualitative Descriptive | Women (n=17), first-line managers (n=16) | Qualitative content analysis |

## Study I (Phase 1)

Development of the questionnaire followed Francis et al.'s (129) manual on how to construct questionnaires based on the TPB.

### *Samples and setting*

For women to be included, they should be >18 years old, and on sick leave for a CMD for 2-24 months. CMDs were defined as mood disorders, neurotic, stress-related and somatoform disorders (diagnose codes F30-F48 (17)). Exclusion criteria were unemployment and severe mental illness. Women were selected within two rural counties in central Sweden, which together consist of

nearly 600,000 inhabitants. Before, and during, the data collection, this area had the highest risk of long-term sick leave due to CMDs in Sweden (169,170).

### *Data collection and procedure*

In 2017, the Social Insurance Agency consecutively identified and invited 150 women to participate. Data were collected using an interview guide based on the TPB (129). Questions concerned believed advantages and disadvantages of RTW (behavioural beliefs - attitude), people or groups who were believed by the women to want or not want the woman to RTW (normative beliefs - social pressure) and believed facilitators of or barriers to RTW (control beliefs - perceived behavioural control). If the women were on full-time sick leave, they were asked about "work resumption", but if they were on part-time sick leave, they were asked about "staying at work". The interviews were carried out with 20 women. Their median age was 45 years, and most of them (n=12) were working within healthcare, social care or schools. A majority (n=14) were still on long-term sick leave at the time of the interview. Five of the women were subsequently purposively chosen for a pilot test of the questionnaire.

### *Data analysis and completion of the questionnaire*

A manifest qualitative content analysis (129) was conducted. Behavioural-, normative-, and control beliefs were analysed separately. The stated beliefs were grouped based on similarities and differences and named based on their content. Totally, there were 41 "belief groups" (see Appendix A). Then, the 75% rule recommended by the manual (129) was used, i.e., choosing the groups that together constituted around 75% of the stated behavioural-, normative-, and control beliefs respectively. The names of the groups (e.g., "Get improved daily routines", see Appendix A) were retained to become items for indirect measures.

In total, 23 "belief groups" were retained to become items for indirect measures: 9 based on behavioural beliefs (attitude), 7 on normative beliefs (social pressure) and 7 based on control beliefs (perceived behavioural control). One additional item was added to each of the items, which makes it possible to calculate the strength/value of the beliefs (129). For example, for the item "If I return to work, I feel that my health will improve. (Strongly disagree – Strongly agree)" the additional item was: "That my health improves is for me (Not important at all – Very important)". Hence, there were 46 items for indirect measures. Subsequently, we added the items for direct measures of attitude, social pressure, perceived behavioural control and items for RTW intentions (129) (n=14). All items can be found in Appendix B. Background questions were included and he questionnaire was called the "RTW Beliefs Questionnaire". Pilot testing led to clarification of background questions and improved visual structure of the items.

## Study 1 (Phase 2)

### *Samples and setting*

For women to be included, they should be >18 years old and on sick leave for a CMD for 2-24 months. CMDs were defined as mood disorders (diagnostic codes F32-F33, F35-F39) and neurotic, stress-related and somatoform syndromes (diagnostic codes F40-F48) (17). Exclusion criteria were unemployment and severe mental illness. For setting, see Study I, Phase 1.

### *Data collection and procedure*

In October 2019 and January 2020, the Social Insurance Agency identified and invited 1196 women by sending them information and questionnaires (presented in Table 2). For this study, only the "RTW Beliefs Questionnaire", developed in Phase 1, was relevant. It included 60 items and aimed to measure RTW beliefs and RTW intentions. It consisted of seven scales (indirect and direct measures for attitude, social pressure and perceived behavioural control and RTW intentions) and six subscales (underlying the indirect measures, i.e. advantages/disadvantages with RTW – behavioural beliefs/attitude, people that want/do not want the woman to RTW – normative beliefs/social pressure and barriers and facilitators with RTW – control beliefs/perceived behavioural control). When responding to the items, women on full-time sick leave focused on "work resumption", while women on part-time sick leave focused on "stay at work". Of the invited women, 371 returned the questionnaire (response rate 31%), of whom 89 were excluded for, e.g., no longer being on sick leave. Hence, a total of 282 women were included. The women were between 22-66 years of age (mean 45). Most of them (n=176) were on part-time sick leave and almost half (n=140) of them worked in the health/social care or school sectors. Stress-related disorders were the most common diagnosis (n=126). The women were asked to write their name and address alongside the questionnaires if they wanted to participate in the follow-up study (Study III). Questionnaires for test-retest were sent to the first 50 women who responded to the 1-year follow-up, of whom 35 participated.

### *Data analysis and summary of findings*

Internal consistency (Cronbach's α) (171) was calculated for the direct measures and test-retest stability (intraclass correlation coefficient) was calculated for the indirect measures (172). For all measures, construct validity (regression analyses) and structural validity (exploratory factor analyses) were calculated (173). The questionnaire was also assessed by reading comments and looking for unexpected response patterns.

The psychometric properties varied between scales. Internal consistency values ranged from low (0.43 – direct measures of social pressure) to high (0.92 – RTW intentions) (171). Test-retest reliability showed moderate (0.70 – indirect measures of social pressure) to excellent (0.92 – indirect measures of attitude) stability (172). All subscales except for disadvantages (underlying

attitude) and non-supporters (underlying social pressure) were significantly associated with their direct scales, confirming the validity of the TPB model (129). Exploratory factor analyses showed that the factors fell out mainly according to the TPB. The item loadings were sufficient for factor analysis (>0.3) (174), and explained variance values were between 40.76 and 60.20%. There was a clear distinction between work life and private life/life as a whole within the attitude and social pressure scales. Examination of the questionnaires showed that items in the scales for indirect measures of social pressure and perceived behavioural control did not fit self-employed women or women who did not feel they had any friends or who did not have colleagues.

## Study II

### *Samples and setting*

The sample and setting in Study II were the same as in Study I, Phase 2, i.e., the 282 women on long-term sick leave for CMDs were included also in this study.

### *Questionnaires*

The questionnaires used were the RTW Beliefs Questionnaire, General Health Questionnaire-12 (GHQ-12) (175) and EuroQol Visual Analogue Scale (EQ-VAS) (176). An overview of the questionnaires is presented in Table 2.

#### *The RTW Beliefs Questionnaire*

This Questionnaire was developed and described in Study I, Phase 1. For the full version of the questionnaire, see Appendix B.

#### *GHQ-12*

The GHQ-12 was used to measure psychological well-being. It has been suggested that a summed score $\geq$12 (177,178) should be seen as reduced psychological well-being. The respondents rate the items based on how they have felt during "the past weeks" (179). GHQ-12 has been considered a moderately good tool for detecting CMDs among a Swedish sample including a general population and individuals with CMDs (179), but also useful for measuring positive aspects of psychological well-being (180). Among the individuals with CMDs, the GHQ-12 had high internal consistency (Cronbach's alpha around 0.90, depending slightly on type of scoring). This is in line with results from international studies among, for example, teachers, individuals with chronic back pain and the Western general population (181–183). It has also shown a low omission rate (181) among the teachers and moderate test-retest reliability (intraclass correlation coefficient 0.73) among individuals with chronic back pain (172,183). Furthermore, studies have concluded that GHQ-12 has good construct validity, but the number of identified factors varies across studies from one to several (181,183). In this study, the GHQ-12 is treated as a unidimensional scale, as suggested by its developer Goldberg

(175). Internal consistency (Cronbach's α) for the baseline sample in this thesis was 0.89, which is considered high (171)

### *EQ-VAS*

Women's overall assessment of their health was measured using the EQ-VAS (176). The point with the instrument is that it covers health aspects that are not objectively observable, but nonetheless important to the individual. For example, individuals can show no problems with health in more directed instruments (e.g., measuring pain, depression) but despite this score less than 100 on EQ-VAS, meaning that there is something important to the individual regarding his/her health that the other instruments cannot capture (184). General populations in the Western world have been observed to have a mean score around 80 on the scale (185,186), and individuals with CMDs around 50 (187,188). EQ-VAS has shown a strong correlation (0.57) with a general health question (187), but a low to moderate correlation with questionnaires detecting CMDs, among individuals with depression and/or anxiety, as expected (188).

**Table 2.** Overview of questionnaires included in this thesis

| Instrument | Scales (number of items) | Scaling |
|---|---|---|
| RTW[1] Beliefs Questionnaire | RTW[1] intentions (3)<br><br>Direct measures of attitude (4)<br>Indirect measures of attitude (18)<br>Subscale: Advantages with RTW[1]<br>Subscale: Disadvantages with RTW[1]<br><br>Direct measures of social pressure (3)<br>Indirect measures of social pressure (14)<br>Subscale: supporters to RTW[1]<br>Subscale: non-supporters to RTW[1]<br><br>Direct measures of perceived control (4)<br>Indirect measures of perceived control (14)<br>Subscale: Facilitators to RTW[1]<br>Subscale: Barriers to RTW[1] | 1-7 or -3 - +3[2] |
| GHQ-12 | The whole questionnaire (12) | 0-3<br><br>0 = Never<br>3 = Always |
| EQ-VAS | The whole questionnaire (1) | 0-100<br><br>0 = Worst imaginable health state<br>100 = Best imaginable health state |

1. Return to work
2. Different wordings, e.g., 1 = Strongly disagree and 7 = Strongly agree, -3 = Not important at all and +3 = Very important

### *Data collection and procedure*

The data collection and procedure were the same as in Study I, Phase 2.

### *Data analysis and summary of findings*

Assumptions for the analyses were fulfilled. Two linear multiple regression models with RTW intention as the dependent variable were built. In the first and unadjusted model, direct scales for attitude, social pressure and perceived behavioural control were entered as independent variables together with psychological well-being and health. In the second model, potential confounders, i.e., perception of employer's actions to facilitate the woman's RTW, age, previous episodes of sick leave due to CMDs, co-morbidity, educational level, and hours of sleep per night were included. Correlations (Spearman's rank coefficient) between single items for indirect measures and total scale score for direct measures were also calculated. For participant characteristics, see Study I, Phase 2.

Results showed that determinants of RTW intentions (i.e., resume or stay at work) were similar in the two regression models. The models showed that women who had a more positive attitude towards RTW, stronger social pressure to RTW and a stronger perceived behavioural control over RTW also had stronger intentions to RTW. The models were significant ($p<0.001$). However, the unadjusted model showed that the higher the psychological well-being, the stronger the RTW intentions, although this relationship disappeared in the adjusted analysis. Instead, women who perceived that their employer had taken actions to facilitate their RTW were shown to have stronger RTW intentions (Figure 2). Correlations between indirect and direct measures showed that improved health and a feeling of meaningfulness were the most important advantages with RTW for having a positive attitude towards RTW. Furthermore, the most important sources of social pressure on RTW were family, relatives and friends. The facilitator most important for a high perceived behavioural control was well-adapted work tasks that one could perform at one's own pace. The strongest RTW barrier related to perceived control was worsened health.

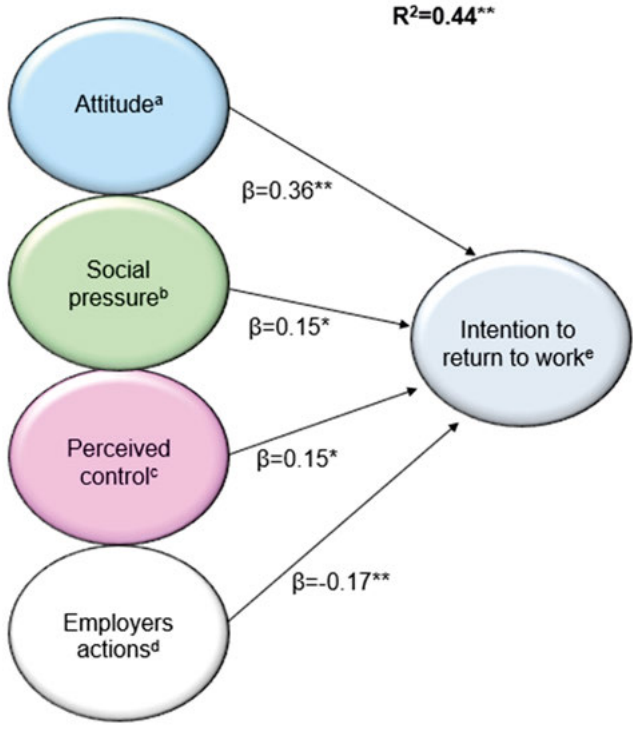


**Figure 2.** Significant relations between beliefs about RTW (work resumption/stay at work) and intentions to RTW, adjusted model, Study II.

a. A higher value corresponds to a more positive attitude towards RTW (work resumption or stay at work)
b. A higher value corresponds to stronger perceived social pressure to RTW (work resumption or stay at work).
c. A higher value corresponds to stronger perceived behavioural control over RTW (work resumption or stay at work).
d. Employer had taken actions to facilitate RTW (work resumption or stay at work), according to the woman = 1. Employer had not taken these actions = 0.
e. A higher value corresponds to stronger RTW (return to work, i.e., work resumption or stay at work) intentions.

*Significant at the 0.05 level
** Significant at the 0.01 level

## Study III

### *Samples and setting*

One year after baseline, the research group sent the questionnaires (Table 2) to the women who were included in Study II. Women were excluded if they had retired, were unemployed, were studying full-time or were on parental leave full-time.

### *Data collection and procedure*

Seven of the women from baseline had not written their name and address alongside the baseline questionnaires, which is why the follow-up questionnaires were sent to 275 women. Of these, 184 responded, but 22 were excluded based on exclusion criteria. Hence, 162 women were included in the 1-year follow-up. The women who were included in the follow-up had significantly higher education levels and stronger RTW intentions at baseline than those who were only included at baseline.

### *Data analysis and summary of findings*

The sample was divided into women who were on full-time sick leave at baseline (n=50) and those who were on part-time sick leave at baseline (n=112). RTW was defined as "work resumption" if the woman was on full-time sick leave or "increased working degree" if the woman was on part-time sick leave. Of the 50 women who were on full-time sick leave at baseline, 25 (50%) had RTW. Of the 112 on part-time sick leave at baseline, 90 (80%) had RTW. To identify predictors of RTW and psychological well-being, logistic and linear multiple regression analyses were performed. Assumptions for these were fulfilled. Baseline values of RTW intentions, attitude, social pressure, perceived behavioural control and health were entered as independent variables. Potential confounders identified from the literature were compared between women who had RTW and those who had not, using Chi-Square tests and Mann-Whitney's U-test. Those who showed a significant difference were included in the regression analyses, i.e., comorbidities and employers' actions for those women who were on full-time sick leave at baseline.

Predictors of RTW were found only among women who were on full-time sick leave at baseline, where the unadjusted as well as the adjusted model were significant ($p<0.001$). The results showed that stronger RTW intentions at baseline were associated with higher probability of having RTW one year later. Stronger perceived behavioural control was significantly associated with a higher probability of RTW as well, but only in the unadjusted analysis. The models explained between 51.0% and 84.7% of the variance in RTW.

Regarding predictors of psychological well-being, they differed from predictors of RTW. Among women on full-time sick leave at baseline, stronger RTW intentions and lower social pressure to RTW at baseline were significantly associated with higher psychological well-being in the 1-year follow-up. However, only social pressure remained significant in the adjusted analysis. Among those on part-time sick leave at baseline, a more positive attitude towards RTW and a better health at baseline were significantly related to a higher psychological well-being one year later. All models were significant ($p<0.001$) and explained between 29.3% and 44.7% of the variance in psychological well-being. Figure 3 provides an overview of significant relationships from Study III.

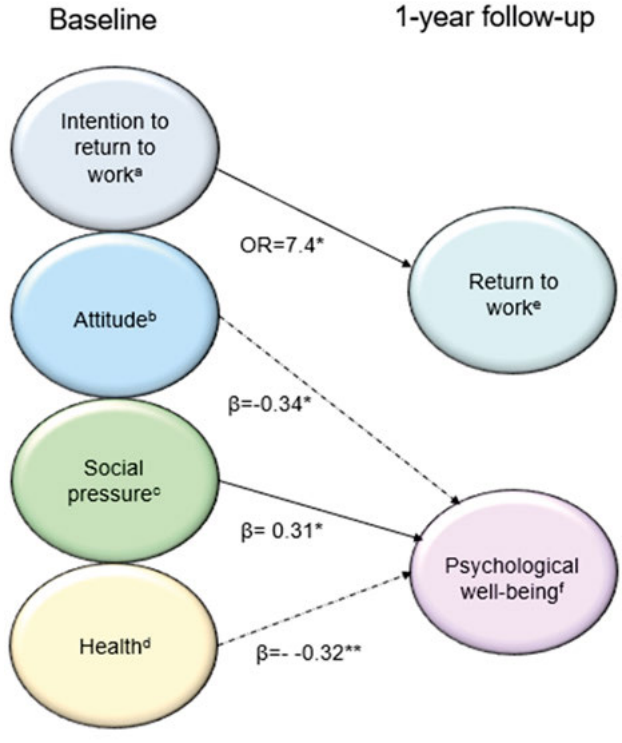


**Figure 3.** Significant relationships from adjusted regression analyses in Study III. The dashed line represents women who were on part-time sick leave at baseline, and the solid line represents women who were on full-time sick leave at baseline.

a. The higher valuer, the stronger RTW (work resumption) intentions.
b. The higher valuer, the more positive attitude to RTW (stay at work).
c. The higher value, the stronger perceived social pressure to RTW (work resumption).
d. The higher number, the better perceived health.
e. Data coding 0 = not RTW, 1 = RTW (work resumption)
f. The lower value, the higher psychological well-being.

*Significant at the 0.05 level
** Significant at the 0.01 level

## Study IV

### *Sample and setting*

Women were selected through convenience sampling via national online groups. They were retrieved from anywhere in Sweden and should have ended sick leave one to nine months ago and work at least 50% at the time of the interview. The first-line managers were retrieved from the same counties as the women in Study I-III. They were selected by purposive sampling based on the professions in which the women from Study IV worked. Inclusion criteria

were that they should have experience in women's RTW process after long-term sick leave for CMDs and worked as a first-line manager for at least six months.

### *Data collection and procedure*

Of 45 interested women, 28 were excluded mainly due to still being on sick leave. A semi-structured interview guide was used, divided into two areas: "Women's health throughout the whole RTW process" and "Women's psychological well-being at work after work resumption". The interviews were carried out between March and October 2022. The women had been on sick leave between two and a half and 23 months and ended their sick leave one to eight months ago. Most of them worked within the healthcare sector, and ten of them had returned to the same job, while seven had changed jobs. Around half (n=8) were working full-time. The women (n=17) were asked to suggest additional questions for the managers ' interview guide. The authors grouped those that were similar, resulting in three additional questions being added to the managers' interview guide. Operational managers were contacted to recruit first-line managers from the same work sectors as the women. In total, 16 first-line managers were interested in participating; all of them fulfilled the inclusion criteria and were included. The managers had worked between nine months and 17 years as first-line managers and most of them (n=11) had between 30 and 49 employees.

### *Data analysis and summary of findings*

All interviews were transcribed verbatim. Women's and first-line managers' data were analysed separately using content analysis, as described by Graneheim and Lundman (189). The analyses were based on the two content areas "Women's health throughout the whole RTW process" and "Women's psychological well-being at work after work resumption", which also were analysed separately. Then, meaning units were drawn from the transcripts and abstracted into codes. Based on the content of the codes, sub-themes and categories were created; see Table 3. Similar sub-themes and categories were identified in both groups (women and managers). Therefore, they were merged to cover both women's and first-line managers' experiences. Overall, the results showed that women's health and psychological well-being during the RTW process depended on the individual characteristics of the women themselves, their private life, work and other RTW stakeholders.

**Table 3.** Content areas, theme, sub-themes and categories.

| **Content area** | **Women's health throughout the whole RTW process** |
|---|---|
| Theme | Struggling with limited resources in an unpredictable situation and approaching stability |
| Sub-themes | Experiencing difficulties in syncing health improvement with the degree of work |
| | Trying to find a match between work characteristics and the person |
| | Having to depend on supporters' personality and experience |
| | Relying on women's use of internal resources |
| **Content area** | **Women's psychological well-being at work after work resumption** |
| Categories | Stable personal conditions |
| | Stimulating work tasks |
| | Strengthening relationships at work |

Regarding the first content area, one theme emerged: "Struggling with limited resources in an unpredictable situation and approaching stability". The theme had four sub-themes. The subtheme "Experiencing difficulties in syncing health improvement with the degree of work" concerned the fact that sick leave does not always provide good conditions for feeling better and that the first-line managers felt limited in supporting the women because the healthcare system and private life were beyond their reach. The sub-theme also concerned the fact that health was not good even after the sick leave had ended, which was why continued support or changing jobs was necessary. The subtheme "Trying to find a match between characteristics of work and person" was about adjusting the women's working conditions to their health needs. Unlike the managers, the women highlighted relational work tasks as the easiest and small things in the work environment as problems, such as having to pass the manager's office every time they got a cup of coffee. The subtheme "Having to depend on supporters' personality and experience" concerned the match and mismatch between individuals personalities and knowledge/experience, which could be a barrier to constructive collaboration. The last subtheme, i.e., "Relying on women's use of internal resources" was about women relying on their own strategies and first-line managers relying on women's personalities for successful RTW.

In the second content area, three categories were created: Stable personal conditions, Stimulating work tasks and Strengthening relationships. These categories reflect how the women and first-line managers described stable personal conditions, such as good health and work compatible with private life, as being important if women are to experience high psychological well-being at work after work resumption. The first-line managers talked about good health in terms of absence of symptoms, while the women talked about it as being able to perform like others do. Stimulating work tasks, for example those that gave meaning or intellectual stimulation, were also important. Managers relied on relational work tasks as the source of meaning at work, but the women meant that for them to feel meaning in helping other people, they needed to have good organizational working conditions as well. Strengthening relationships at work was vital to experiencing high psychological well-being. However, the women emphasized the importance of having fun together with colleagues, while managers talked more about tolerance and inclusion in the working group.

Taken together, results from the two content areas revealed that women's health and psychological well-being during the RTW process depend on the individual characteristics of women themselves, their private life, work and RTW stakeholders.

# Ethical considerations

Prior to participation, all participants received written information about the aim and procedure of the studies, as well as about data storage. They were also informed that they had free access to the information about them that is handled in the studies and could have any errors corrected if necessary. They were additionally informed that the results would be presented at the group level so that no individual could be identified. Study I, Phase 1, was approved by the Ethics Review Authority: reg.no. 2017/366. Study I, Phase 2, and Study II-III were approved by the Ethics Review Authority: reg.no. 2019-04043. An amendment application for Study I Phase 2 was made for test-retest, reg.no. 2020-02587. Study IV was approved by the Swedish Ethical Review Authority in March 2022 (reg.no. 2022-00730-01). All participants gave their written informed consent prior to participation and were allowed to keep a copy of the information letter and the consent form.

There were some study-specific ethical issues to consider. Because the women had one or more CMDs, where exhaustion and concentration difficulties are common symptoms, we tried to include as few items as possible without losing touch with the respective study aims. Furthermore, the Social Insurance Agency sent out the invitations for Study I-III, which were prepared by the researchers. This was considered an important signal to the participants that the researchers had no information on their identity. On the other hand, this could increase the risk of the women feeling they were in a dependent position in relation to the Social Insurance Agency and fearing that their benefits or care would be affected negatively if they did not participate. Another risk was that they would fear that the Social Insurance Agency or other stakeholders would have access to their responses. To reduce these risks, some actions were taken prior to data collection. The women were informed that the researchers had no knowledge about their identity before they received the consent form, and that no unauthorized person had access to the completed questionnaires or consent forms. Participants in all of the studies were also informed that they could, without explanation, withdraw their participation at any time without that impacting their benefits, treatment or care. To avoid causing unnecessarily sensitive situations in Study IV, we chose not to match the employee and the manager. Furthermore, the items in the questionnaires or the interview questions could cause the women to reflect over their situation in a way that they would not have done otherwise. The women were therefore encouraged to contact the researchers by phone or e-mail if they had any concerns or questions.

# Discussion

## Main findings

The overall aim of this thesis was to generate knowledge about women's return to work (RTW) after long-term sick leave for common mental disorders (CMDs) by investigating their beliefs, intentions, perceived health and psychological well-being. The results, which is based on women's and first-line managers' perspectives, showed that RTW was dependent on three core aspects: Private, personal and work-related aspects. Women's RTW beliefs, investigated in Study I-III, concerned these three aspects. Moreover, Study IV revealed that women's health and psychological well-being in the RTW process were dependent on these three aspects. The private aspect concerned relations and conditions outside work, for example one's family situation, health care personnel, one's own economy, caring for children and relations with partners and friends. The personal aspect concerned what belongs to the individual herself, for example personal characteristics, beliefs, health, psychological well-being, values, intentions, and own strategies. The work-related aspect concerned relations and conditions in working life, for example work tasks, work hours and relations with colleagues and the manager. The three aspects seem to be of equal importance and affect each other, see Figure 4. The results indicate that to achieve an earlier and more sustainable RTW, all three aspects need to be taken into account in a way that supports the women's individual needs in relation to RTW.

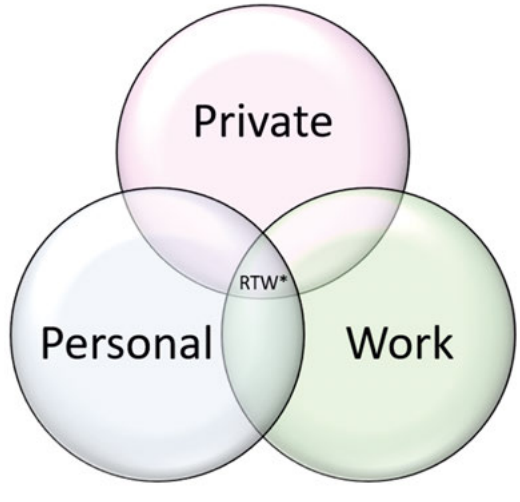


**Figure 4.** The core aspects on which RTW is dependent among women after long-term sick leave for CMDs.
* Return to work, e.g., work resumption or stay at work

## The overlooked role of relations in private life

In this thesis (Study I-II and IV), the women's private life came up as an essential aspect regarding RTW, especially relations in private life. In previous qualitative studies, employees and other RTW stakeholders have described the importance of relations in private life for RTW after CMDs. For example, understanding from close others has often been described as important for RTW (7,88,149,190–192). The close others could contribute with a feeling of being validated (88,190), safe (190) and provide practical support in everyday life (149,192,193). However, employees have also described difficulties to express their needs to their close others (88,149). Quantitatively, there is a lack of research regarding the role of relations in private life. A few studies exist but they have limitations, such as that social support from others also included people at work (133) or that the study include employees with various conditions (not only CMDs) (194). However, these studies indicate that close others are important for RTW after CMDs. It has also been shown that employees on sick leave for CMDs experience less social support in private life during the sick leave than employees with other conditions (133). Based on the above, the role of private life in the RTW process after CMDs should be investigated further.

There is more evidence for the importance of private life for RTW among other groups. For example, one study among women on long-term sick leave for various reasons found that women who had an emotionally supportive relationship with someone outside work had a higher probability of RTW (194). Another study found that social support outside work was associated with RTW among women with musculoskeletal disorders (195). Research about employees with chronic disorders in the Netherlands has come even further regarding research about relations in private life. For example, the researchers found that so-called "significant others" (e.g., family and friends) and the employee influence each other's beliefs about RTW (196) and that the significant others influence RTW through their attitudes towards it (197). The authors also investigated the employees' attitudes towards involving significant others in occupational healthcare and found that the employees generally had positive attitudes towards involving significant others. This was because they felt that a well-informed family member/friend would enhance the support he/she gave in daily life and when making RTW-related decisions. However, the employees also had some concerns, for example that they would overburden the significant other or feel that he/she was getting too involved (198).

Regarding CMDs, Swedish researchers have actually recently suggested that private life aspects should be included in future RTW interventions (88,192) and RTW support (75,84), especially among women (84,88) because they have higher demands and work-home interference than men do (75,88). Women in Nybergh et al.'s study (88) actually expressed a need for RTW interventions that take private life into account, even if the main reason for the sick leave was work-related. Women who had taken their partners with them to their psychologist experienced it as a turning point because it meant that the partner could understand their needs better (88).

In summary, inclusion of private life aspects in RTW interventions/support could be useful. However, some of the women in this thesis could not answer items about friends because they felt they did not have any. Also, around a quarter did not have a partner. It can therefore not be assumed that all women have a potentially supporting environment in their private life, which is yet another issue to target.

## Health and psychological well-being – essential for, but complex in relation to, return to work

Health and psychological well-being permeated all studies in the thesis. In Study I, Phase 1, women stated a series of beliefs about RTW, of which several were related to health and psychological well-being (e.g., health, meaning, belonging to a social context, feeling competent). These beliefs were also among the most frequently mentioned and were, therefore, retained to become items in the RTW Beliefs Questionnaire, according to the 75% rule (129). However, the role of health and psychological well-being after long-term sick leave for CMDs is multifaceted and complex. First, the women reported relatively strong RTW intentions at baseline, but at the same time reduced health and psychological well-being. A similar finding was also reported in a previous qualitative study, i.e., that during long-term sick leave for CMDs employees had a strong intention to increase their working degree despite the presence of symptoms (191). Hence, it seems like health, psychological well-being and RTW do not necessarily go hand in hand among employees on long-term sick leave for CMDs. This is also strengthened by the longitudinal study in this thesis, which showed that psychological well-being and RTW were predicted by different factors. One of the most complex findings was that stronger social pressure to RTW was associated with stronger RTW intentions but lower psychological well-being. A cautious interpretation of this is that women may RTW because of social pressure to do it, but that it is not sustainable because the same social pressure causes them to experience reduced psychological well-being. Previous research among people with depressive symptoms has found that social pressure to feel better is associated with increased depressive symptoms (199). Taken together, this indicates that health and psychological well-being are dependent on social pressure in one way, while RTW is dependent on social pressure in another way. To make RTW compatible with good health and high psychological well-being, the role of social pressure has to be investigated further. Another complex finding from this thesis was that psychological well-being was predicted by different factors depending on whether the women were on full-time sick leave or part-time sick leave (Study III). This indicates that promotion of women's psychological well-being requires other actions earlier in the RTW process compared to later in the process.

Furthermore, Study II showed that *current* health and psychological well-being during sick leave were less important for RTW intentions than *believed future* health and psychological well-being were. This means that, when promoting RTW among these women, it might be a good idea to focus on making RTW desirable in terms of health and psychological well-being. This thesis

also showed that even though the women felt better over time, health was often still reduced after the sick leave had ended (Study IV). The long duration of symptoms is also seen in previous research among employees with CMDs (200,201). Hence, promotion of health and psychological well-being should be ongoing also after the sick leave has ended, to prevent relapse. Important to notice though is that, according to some women in the qualitative study (Study IV), health was not always primarily a matter of getting rid of symptoms but rather of being able to perform like others do. This confirms the importance of adjustments at/support from work, i.e. that promotion of health after CMDs is not only a "health care thing".

Surprisingly, the role of support from healthcare was not very prominent in the studies in this thesis. This might mean that there is potential for improvement in, for example, primary care regarding management of CMDs. Today, primary care is actually developing methods for treatment and management of CMDs, for example by involving district nurses as "care managers" (202).

## Finding a balance between resources and demands is not the whole story

Generally in the RTW process, there is a focus on adjusting work to the employee's limitations (49,203). The goal is to find a balance between the individual's resources and demands placed on him/her (46). However, based on the results in this thesis, it seems as though more than only resources and demands must be balanced for the women to be able to RTW. Work must also be in line with the individual's personal values. If the work is not in line with those, the woman can feel lower psychological well-being at work after work resumption and possibly also a less positive attitude towards RTW. For example, if one works as a nurse, doing things formally correct according to the employer's rules may not be enough to feel that one is helping a patient in a meaningful way. The nurse might have another idea about how patients should be treated or how the work should be organized. There may hence be a conflict between being loyal to the employer and being loyal to the patients. Generally, research has shown that a stronger commitment to personal values is associated with stronger work engagement (204). Furthermore, a higher subjective fit between person (e.g., personality (205) and personal values (206)) and work is associated with positive work outcomes such as higher job satisfaction, lower turnover intentions (205) and higher psychological well-being (206) among employees in general. Hence, it would probably be beneficial if RTW stakeholders would focus on value congruence between the woman and work when supporting RTW after long-term sick leave for CMDs.

## The contribution of the Theory of Planned Behaviour

In this thesis, the TPB could contribute with a mapping of women's RTW beliefs after long-term sick leave for CMDs. Women stated several beliefs within each area (advantages, disadvantages, supporters, etc.). Some beliefs were expected, such as symptom burden as a barrier to RTW and individual adaptations of work tasks as a facilitator. However, others were less expected, such

as that there were non-supporters of RTW and that those could be found in different areas, such as the women's own family and in healthcare.

The theory also contributed with an increased understanding of what underlies the women's RTW intentions as well as actual RTW (work resumption). This is in line with previous research among employees with musculoskeletal disorders and CMDs (131–133). Hence, this thesis strengthens the assumption that the TPB is useful in RTW research. However, in the current thesis, the link between RTW intentions and RTW among women on part-time sick leave was missing. Because the theory requires high stringency between predictors and outcomes (130), this intention-behaviour gap can be due to measurement issues. The outcome did not correspond perfectly to the measurement at baseline (130) because the predictors concerned "intention to stay at work three months from now" and the outcome at the 1-year follow-up was having increased the percentage of work. Hence, there was a mismatch both between timelines and RTW measures. Also, one year is quite a long time, and the women's RTW intentions might have changed during this year. Having a long period between baseline and follow-up is a known reason for intention-behaviour gaps (130). Another reason for intention-behaviour gaps is that the behaviour was more difficult to perform in real life than expected (130). For example, demands at work could increase due to unexpected reorganizations due to the Covid-19 pandemic. An intention-behaviour gap among employees on part-time sick leave for CMDs was found in Noordik et al.'s qualitative study (191) as well. This indicates that increasing the working degree from part-time sick leave is a more complex behaviour than work resumption is, and that the outcome has to be more specific if the TPB is used to predict RTW among those on part-time sick leave.

Furthermore, in Study III we tested psychological well-being as the outcome instead of behaviour (RTW). This showed that RTW beliefs were able to predict psychological well-being, which indicates a broader use of the theory. What is interesting about this is that it increases the awareness that beliefs underlying a behaviour might affect another outcome in a desirable or undesirable way, thereby affecting the "total outcome". For example, in Study II, a stronger social pressure to RTW was associated with stronger RTW intentions (which in turn was associated with actual RTW). However, stronger social pressure was also associated with lower psychological well-being. The "total outcome" can thus be a woman who starts working despite low psychological well-being, and relapses, i.e., experiencing non-successful RTW overall. Hence, promotion of behaviour might have other undesirable consequences, and predictors from the TPB could be used to identify them.

## First-line managers – having an important but back-bound role

Findings in this thesis showed, as expected, that first-line managers are important for women's RTW after long-term sick leave for CMDs. However, the managers felt they could not always provide sufficient support for the women, which is in line with previous research (106,207). Common reasons for this

were that they had limited power to affect organizational changes decided by top management and that they felt lack of knowledge about CMDs and how to handle them, which has also been shown in previous research (52,95,106,207). However, a recently conducted problem-solving intervention involving first-line managers, employees on sick leave for CMDs and rehabilitation coordinators caused the managers to feel that their knowledge had increased (95).

In the current thesis, the managers described feelings of frustration about not being able to help more. In previous research, guilt has been described as well (106). Both in this thesis and in previous research (106), managers reported feeling that having had personal experience of CMDs themselves was a facilitator to supporting the women because they could understand the situation better. Furthermore, teamwork with the other stakeholders could be challenging. The current thesis revealed that, according to the first-line managers, other RTW stakeholders lack of experience in their role and that a mismatch in perceptions between stakeholders about what support should be given to the employee was a barrier to good teamwork. Differences in personal characteristics among stakeholders (including employees) were overall a major challenge in the RTW process according to managers and the returning women, something that has also been seen in previous research (208). Hence, it is not enough to have a formal role (e.g., as a manager), but there must also be sufficient knowledge about CMDs and strategies for managing personal differences.

Another described reason for not being able to provide sufficient support to the women was that the women had private life issues that had to be solved as well – issues that were inaccessible to the managers. This can be related to a study from the Netherlands showing that the employees and the manager had different priorities. For the employees, it was most important that home life did not suffer because of work, but for the managers, it was more important that the work did not get negatively affected because of the home situation (209). A review showed that because of all the difficulties associated with supporting employees, managers tend to focus on things that are easier to deal with (e.g., work hours) than on more complicated things (e.g., conflicts at work), even if the latter is sometimes more important for the employee's ability to RTW (49). Yet another study found that women perceive their manager as less supportive (e.g., in providing RTW support and showing sympathy) than men do (210). Thus, the managers may benefit from more support in their role. One way is peer support as described by Hartviksen et al. (211), for example, discussion groups with other managers where they can reflect and share knowledge with each other regarding RTW.

In conclusion, first-line managers have a highly challenging role in the RTW process, in which they may feel alone and have limited ability to support the employee. On the other hand, with sufficient resources, they have the potential to affect the RTW in a positive way for the returning employee. A guideline meant to give first-line managers support in their role of encouraging employees with CMDs to stay at work has recently been developed in the Netherlands (212). It might be a good idea to introduce something similar in Sweden as well.

## Strengthening the positive, not only reducing the negative

Overall, the results in this thesis showed that it seems more important to add "positive things" rather than to only reduce the "negative things". Findings revealed that, to promote a more positive attitude towards RTW and higher psychological well-being, positive aspects in life/at work need to be added. For example, the disadvantages of RTW and the non-supporters of RTW were not significantly associated with attitude and social pressure (Study I). This means that if the women believed their symptoms would worsen if they RTW and/or believed they would not manage the same work achievements they previously did if they RTW, this did not affect their attitude towards RTW. Moreover, if they believed their friends and family did not want them to RTW, this did not influence their feeling of social pressure to RTW. Furthermore, the women mainly needed the addition of positive things (e.g., good health, stimulating work tasks and strengthening relationships at work) to feel high psychological well-being at work following work resumption (Study IV). The need to adopt a healthy lifestyle to be able to work despite having CMD symptoms has also been described in earlier research (213). Taken together, this indicates that, to promote RTW, it is more important to strengthen positive aspects and utilize available support than to reduce the negative aspects and non-supporters. This is an important finding for stakeholders who aim to facilitate RTW, because one way to overcome RTW barriers may be to strengthen the advantages associated with RTW. Because there is an empirical relationship between attitude, social pressure and perceived behavioural control in the TPB model (130), it may be that strengthening the advantages (a more positive attitude) causes other people to encourage RTW (stronger social pressure), which may in turn facilitate RTW (e.g., because people are willing to provide support, which increases the sense of perceived behavioural control).

Another interesting finding regarding the advantages of RTW was that the importance of an improved personal economy was negligible. It was more important, according to the women, that RTW entail improved health, a sense of meaningfulness in life, a feeling of being in a social context, having better routines in daily life and feeling competent at work. These findings are similar to those in a study based on TPB among employees with musculoskeletal disorders (131). Hence, it seems like improved income is one advantage of RTW, according to women, but not important enough to increase RTW intentions.

## Methodological considerations

### *Internal validity*

First, the designs of the quantitative studies involve threats to internal validity because relationships between variables cannot be considered causal. However, the women were selected by the Social Insurance Agency based on a diagnosis made by a treating physician. This increases the internal validity because it ensures that the women were on long-term sick leave for a CMD. However, all measured variables were self-reported, which is why some self-reported bias (214) cannot be ruled out. For example, today RTW is a socially

desirable behaviour, which might have caused the women to overestimate their RTW intentions. Actually, the intention scale showed a ceiling effect, which makes it less appropriate to use for detecting changes for this particular group (215).

Before the quantitative analyses were carried out, we assured that the assumptions were fulfilled, such as outliers, linearity, multicollinearity and number of variables (174,216,217). However, it is difficult to find the "perfect" regression model (214). In this thesis, the statistical power was not optimal because of the relatively small sample sizes. Furthermore, there were some issues regarding the variables that have been measured (214), for example scales with low internal consistency, and this might have affected the outcome. When the internal consistency is as low as for the social pressure scale (Cronbach's $\alpha$=0.43), the items are not actually correlated with each other (171), and we cannot be sure of what in fact is being measured. There are critiques against developing a new questionnaire (as opposed to changing an existing one), because new questionnaires usually have flaws (119). However, there was no existing questionnaire based on the TPB and focused on RTW among women after long-term sick leave for CMDs, which is why we chose to develop a new one. Moreover, women included in the follow-up had stronger RTW intentions and higher education levels compared to those only included at baseline. This means that results might not be valid for those with lower RTW intentions and education level.

Regarding the RTW Beliefs Questionnaire, other psychometric testing could have been carried out, such as confirmatory factor analysis (173). However, we wanted to investigate the indirect measures without an a prior hypothesis, because this was the first questionnaire developed from the TPB for this population. Regarding measurement of psychological well-being, the GHQ-12 is developed to capture psychological distress, not primarily positive feelings (218). It has nevertheless been seen to be useful for measuring positive psychological aspects (180), which is why we considered it to be appropriate for measuring psychological well-being in relation to both CMD symptoms and positive feelings. Worth noticing, however, is that the questionnaire was developed at another time, in 1970s, (218) and therefore only includes items directed towards depression and anxiety, not stress-related disorders. Still, research has shown that GHQ-12 can detect adjustment disorders, which is a kind of stress-related disorder (178), but it may not cover other stress-related disorders. For example, measurement of exhaustion disorder includes items about memory and hypersensitivity to sensory impressions (219), which is not included in the GHQ-12. This means that the women might have lower scores (i.e., higher psychological well-being) on the GHQ-12 than they would have if the questionnaire had also covered stress-related disorders in a more comprehensive manner.

The use of the EQ-VAS (176) to measure health has some limitations as well. The main issue is that we do not really know what is being measured (220) because the definition of health is subjective. However, this was a reason for investigating the concept of health more deeply in Study IV. The scale also

has some interpretation difficulties. For example, a study among Asian populations showed that some respondents found it difficult to interpret the scale and that best imaginable health state was unachievable (221). Hence, despite its seemingly simple design, participants may find it difficult to respond to. Finally, the pandemic emerged during the year between baseline and the 1-year follow-up, which might have affected the women's RTW beliefs and/or intentions.

### *External validity*

Even though a high response rate does not guarantee a generalizable result (222), the risk of response bias is high when the response rate is below 50% (223). In this thesis, the response rate at baseline was 31%, and it decreased even further, to 24%, due to exclusion criteria. Hence, there might be response bias in the results. For example, the results may represent a "healthier" sample compared to the true sample. The length of the questionnaires (>80 items) might have made it difficult for the most exhausted women to complete it. In fact, one woman said she needed help from her psychologist to fill in the questionnaire and even then, it took an hour. Also, the sample was not randomized, which jeopardizes the generalizability of the results (223). Furthermore, the women were collected from a relatively rural area in Sweden with no big cities. The sample therefore does not represent women from big cities in Sweden. RTW beliefs might differ between employees in rural areas and those in populated areas, because there might be more possibilities to change jobs in a large city. The sample was also slightly older than the national sample (19). Despite these limitations, the distribution of diagnoses corresponded to the national pattern in Sweden, i.e., stress-related diagnoses were most common followed by depression and anxiety (19). It also followed the national pattern regarding type of occupation, i.e., healthcare, schools and social services were the most common professions among women on sick leave for CMDs (19). This increases the generalizability of the findings. Moreover, the sick leave length could not be determined in more detail than 2-24 months, because the self-reported length did not correspond to the length registered in the Social Insurance Agency's register. Some women wrote that they had been on sick leave for more than two years. This discrepancy could be due to the insurance system, which counts the period after a short gap in sick leave as a new period of sick leave.

During the time between baseline and follow-up, the Covid-19 pandemic was ongoing, and many workplaces were affected by this. In this thesis, a significant proportion of the women reported that the pandemic had affected their RTW and well-being. This threatens the generalizability of the results to times not affected by such an extreme global crisis. Furthermore, the results might not be valid for men, because gender differences regarding what factors are important to RTW have been found (88). Moreover, RTW beliefs might differ between men and women because of, for example, different cultural roles in society, which shape our beliefs (117,130). Given the cross-country differences in welfare systems and culture, the results may not be valid in other countries.

### *Trustworthiness*

#### *Women*

Women in Study IV were selected using convenience sampling on digital platforms. Nonetheless, variation in age, diagnosis, profession, length and degree of sick leave, length of working after sick leave and geographical variation was achieved. This strengthens the credibility, because the phenomenon under investigation can be described with variations (189). Furthermore, the interviews were relatively long and concerned only two areas. Spending considerable time with participants may make them more relaxed and likely to express themselves frankly, making the data more comprehensive (224). The use of quotations in the results does strengthens the credibility, because it makes it apparent that the actual data are in line with the analysed results (189). Moreover, a majority of the authors took part of interviews and all authors were involved in the analyses, the goal being to ensure credibility and confirmability (189,223). The dependability, however, might be threatened by the fact that the RTW process occurred during the Covid-19 pandemic, which make the findings not completely valid for another timepoint (189). However, all the women's RTW processes occurred during the pandemic; this means that the conditions did not change significantly during the time of the study, which strengthens the dependability (189) but threatens the transferability to other conditions (189,223). However, regarding transferability it is a strength that the women's diagnoses and professions corresponded to the national pattern, just as they did in the quantitative studies (19). Furthermore, the women were chosen from the whole country, which entailed geographical variation, making the results transferable to both rural and urban areas. The results are perhaps not completely transferable to men, however, because health patterns during the RTW process and health aspects of importance for RTW seem to differ between genders (225).

#### *First-line managers*

The women were involved in the design of the managers' interview guide, which is seen as a quality criterion because it may increase the relevance of the research (226). There is an international movement towards more involvement of the target group (e.g., patients) in the research process (227). The women's involvement could perhaps also be seen as a strength regarding credibility, because the likelihood of the phenomenon being comprehensively covered increases. The managers were purposively chosen based on the sectors the women worked in, the goal being to increase the chance of the women and managers relating to the same context. However, the managers were only chosen from two rural counties in central Sweden, which decreases the transferability to other, e.g., more urban, contexts. The number of subordinates and the managers' ages did though correspond to the national pattern (228). Just as among the women, the use of quotations in the results strengthened the credibility (189). The managers varied in age, sector, gender and experience, which also strengthens the credibility (189). However, it is not known at what point they had experience of women on long-term sick leave for CMDs. Some of

them might have had it years ago and some at the time of the interview. If it occurred a long time ago, there may have been some memory bias, which threatens the credibility (223). This also threatens dependability, because the experiences are from different times and perhaps different societal contexts. To ensure confirmability and credibility, several authors read and listened to the audio recorded and written interviews and all were involved in the different steps of the analyses (189,223).

# Future research

This thesis opens several doors to future research. First, the RTW Beliefs Questionnaire should be further developed and tested to enhance its psychometric properties. Even though this thesis shows that TPB seems to be a useful model for explaining and predicting RTW, the mediating effects in the theory was not tested, e.g. the mediating effect of RTW intentions on RTW was not tested. To investigate whether the TPB model in its entirety is applicable to women on long-term sick leave for CMDs, it should be tested in a larger sample with, for example, structural equation modelling. Furthermore, because sick leave due to CMDs are common among men as well (13,19), the questionnaire could be tested and developed based on them too. Moreover, because we did not find any predictors of RTW among women who were on part-time sick leave at baseline, more knowledge is needed regarding predictors of RTW among women on part-time sick leave. Future research should also investigate the role of social pressure from close others in the RTW process and perhaps also women's views on involving their significant others in the RTW process. Finally, research should investigate how first-line managers can develop their support to the women in the RTW process.

# Conclusions

- Women's RTW after long-term sick leave for CMDs involves private, personal, and work-related aspects within which the women have individual needs to be able to RTW (Study I-IV).
- Relations in private life seem to influence RTW (Study I-II, IV).
- RTW should promote an improved health and psychological well-being (Study I-II, IV).
- RTW support may need to look different depending on where in the RTW process the woman is (Study III-IV).
- TPB is a promising theory for explaining and predicting RTW among women after long-term sick leave for CMDs (Study I-III).
- Women's health can still be decreased after the end of sick leave (Study IV).
- First-line managers play an important role for women in the RTW process, but they need more support in their role and knowledge about CMDs/RTW (Study IV).

# Practical implications for return-to-work stakeholders

- RTW stakeholders should be aware of that women's relations in private life can affect the ability to RTW after long-term sick leave for CMDs.
- A focus on making RTW desirable for the women in relation to health and psychological well-being should be considered.
- Promotion of the woman's health should continue after the end of sick leave.
- First-line managers should have opportunities to increase their knowledge about CMDs and the RTW process in general. Moreover, they should have resources to support each women's individual needs in the RTW process.

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# Appendix A

Belief groups (n=41) for potential items for indirect measures in the RTW Beliefs Questionnaire

| Behavioural beliefs | Normative beliefs | Control beliefs |
|---|---|---|
| *Included* | *Included* | *Included* |
| *Advantages*<br>Being a part of a social context<br>Get improved daily routines<br>Get improved health<br>Feel that life is more meaningful<br>Get an improved economy<br>Feel secure (if at the same working place)<br>Maintain or increase feeling of competence | *Supporters*<br>Family and relatives<br>Friends<br>Social Insurance Agency<br>Colleagues<br>Employer | *Facilitators*<br>Getting support from friends, family and relatives<br>Getting support from healthcare staff<br>Well-adapted work tasks one can perform at one's own pace |
| *Disadvantages*<br>Increased symptoms<br>Won't manage the same achievements as before | *Non-supporters*<br>Family and relatives<br>Friends<br>(if health gets worse) | *Barriers*<br>Employer's, colleagues' and/or stakeholders' unreasonable demands<br>My own unreasonable demands<br>Lack of support from the surroundings<br>Deteriorating health |
| *Excluded* | *Excluded* | *Excluded* |
| *Advantages*<br>Feeling needed | *Supporters*<br>Acquaintances, like neighbours<br>Care recipients/clients<br>Healthcare staff<br>Society at large | *Facilitators*<br>Decreased demands<br>Support from colleagues<br>Support from authorities<br>Coping<br>Meaningfulness |
| *Disadvantages*<br>Negative treatment from others<br>Difficulty changing patterns<br>Poor leadership<br>Difficulty combining working life and private life | *Non-supporters*<br>Colleagues<br>Employer<br>Healthcare staff | *Barriers*<br>Poor work environment |

# Appendix B

**RTW Beliefs Questionnaire**

**For those who are on full-time sick leave**

**1.** I expect to return to work within 3 months

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**2.** I want to return to work within 3 months

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**3.** I intend to return to work within 3 months

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**For those in work**

**4.** I expect to stay at work 3 months from now

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**5.** I want to stay at work 3 months from now

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**6.** I intend to stay at work 3 months from now

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**The statements below are aimed both at those on full-time sick leave and those currently in work. If you are on full-time sick leave, please focus on**

**the phrase ”return to work”. If you are in work, please focus on the phrase ”stay at work”.**

**7.** If I return to work/stay at work, I will feel more like I am part of a social context.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**8.** If I return to work/stay at work, I will have improved daily routines.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**9.** If I return to work/stay at work, life will feel more meaningful.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**10.** That my family/relatives want me to return to work/stay at work is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**11.** That my friends want me to return to work/stay at work is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**12.** That the Social Insurance Agency wants me to return to work/stay at work is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**13.** If I return to work/stay at work, I feel that my health will improve.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**14.** If I return to work/stay at work, there is a risk that my symptoms will increase.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**15.** If I return to work/stay at work, there is a risk that I won't manage the same achievements as before.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**16.** That my colleagues want me to return to work/stay at work is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**17.** That my employer wants me to return to work/stay at work is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**18.** That my family/relatives don't want me to return to work/stay at work if there is a risk that my health will deteriorate is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**19.** That I will receive support from my surroundings (friends, family and relatives) to return to work/stay at work is:

Unlikely 1 2 3 4 5 6 7 Likely

**20.** That I will receive support from healthcare staff (such as physician, counsellor, nurse) to return to work/stay at work is:

Unlikely 1 2 3 4 5 6 7 Likely

**21.** That I will be given well-adapted work tasks which I can perform at my own pace is:

Unlikely 1 2 3 4 5 6 7 Likely

**22.** Return to work/stay at work is for me:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Harmful | | 1 | 2 | 3 | 4 | 5 | 6 | 7 Beneficial |
| Worthless | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Useful |
| Good | | 1 | 2 | 3 | 4 | 5 | 6 | 7 Bad |
| Pleasant | | 1 | 2 | 3 | 4 | 5 | 6 | 7 Unpleasant |

**23.** Return to work/stay at work is for me:

Easy 1 2 3 4 5 6 7 Difficult

**24.** Increased participation in a social context is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**25.** Having better daily routines is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**26.** Perceiving meaningfulness in life is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**27.** That my health improves is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**28.** Being able to reach the same achievements as before at work is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**29.** Improving my personal economy is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**30.** Feeling secure in my place of work is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**31.** Feeling competent in my work is:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**32.** Not experiencing an increase in my symptoms is for me:

Not important at all -3 -2 -1 0 +1 +2 +3 Very important

**33.** It is expected of me to return to work/stay at work.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**34.** That my friends don't want me to return to work/stay at work if there is a risk that my health will deteriorate is for me:

Not important at all 1 2 3 4 5 6 7 Very important

**35.** I am confident that I can return to work/stay at work if I want to.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**36.** The decision to return to work/stay at work is beyond my control.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**37.** Whether I return to work/stay at work is entirely up to me.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**38.** If I return to work/stay at work, my economy will improve.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**39.** If I return to/stay at the same workplace, I will feel secure.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**40.** If I return to work/ stay at work I will keep/increase my sense of competence.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**41.** That the employer, colleagues and/or authorities put unreasonable demands on my work performance is:

Unlikely 1 2 3 4 5 6 7 Likely

**42.** That I myself will put unreasonable demands on my work performance is:

Unlikely 1 2 3 4 5 6 7 Likely

**43.** That I will experience lack of support from my surroundings regarding returning to work/stay at work is:

Unlikely 1 2 3 4 5 6 7 Likely

**44.** That my health will deteriorate if I return to work/stay at work is:

Unlikely 1 2 3 4 5 6 7 Likely

**45.** I feel social pressure from my surroundings to return to work/stay at work.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**46.** People who are important to me want me to return to work/stay at work.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

**47.** My family/relatives want me to return to work/stay at work.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**48.** My friends want me to return to work/stay at work.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**49.** My family/relatives do not want me to return to work/stay at work if there is a risk that my health will deteriorate.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**50.** My colleagues want me to return to work/stay at work.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**51.** The Social Insurance Agency wants me to return to work/stay at work.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**52.** My employer wants me to return to work/stay at work.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**53.** My friends do not want me to return to work/stay at work if there is a risk that my health will deteriorate.

Strongly disagree -3 -2 -1 0 +1 +2 +3 Strongly agree

**54.** Support from healthcare staff (such as physician, counsellor, nurse) makes me:

Less motivated -3 -2 -1 0 +1 +2 +3 More motivated

to return to work/stay at work.

**55.** Well-adapted work tasks I can perform at my own pace make me:

Less motivated -3 -2 -1 0 +1 +2 +3 More motivated

to return to work/stay at work.

**56.** The employer's, colleagues' and/or authorities' unreasonable demands on my work performance make it:

More difficult -3 -2 -1 0 +1 +2 +3 Easier

to return to work/stay at work.

**57.** My own unreasonable demands on my work performance make it:

More difficult -3 -2 -1 0 +1 +2 +3 Easier

for me to return to work/stay at work.

**58.** Lack of support from my surroundings makes it:

More difficult -3 -2 -1 0 +1 +2 +3 Easier

for me to return to work/stay at work.

**59.** Deterioration in my health makes it:

More difficult -3 -2 -1 0 +1 +2 +3 Easier

for me to return to work/stay at work.

**60.** Support from my surroundings (friends, family and relatives) makes me:

Less motivated -3 -2 -1 0 +1 +2 +3 More motivated

to return to work/stay at work.

**Papers**
Associated papers have been removed in the electronic version of this thesis.
For more details about the papers see:
http://urn:nbn:se:hig:diva-43469