

EVALUATION OF THE COPING WITH STRAIN COURSE IN WORKPLACES

A four-year longitudinal randomized controlled trial

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Gry Anette Sælid

SUMMARY

Subsyndromal symptoms, or mild to moderate symptoms of depression, contribute more than any other health condition to absence from work. Mental illness is the leading cause of sickness absence and work incapacity in most developed countries, and depression is predicted to be the leading cause of work disability by 2020. Despite the high prevalence of mental health problems, in most workplaces mental health programmes are not available, and when such programmes are introduced, attention is seldom paid to documentation of the effects.

Theories that define and describe a workplace that fosters mental health are characterized by their multiplicity and complexity. Typical factors that may influence the mental health of employees are job design, team and group factors, organizational factors, and home and work factors. There may be interactions between such factors and with personal (individual) factors.

This thesis examines to what extent a mental health intervention in the workplace may contribute to improved mental health, and independent of the intervention, the longitudinal interrelations between selected factors are examined. More specifically: this thesis presents an evaluation of the Coping With Strain (CWS) course with focus on effects of the course on symptoms of depression, self-efficacy, self-esteem, and vitality. Furthermore, the prospective reciprocal associations between symptoms of depression, generalized self-efficacy and social support are examined.

The CWS course aims to empower participants, promote mental health, and reduce mental ill-health at an individual level. It is mainly based on principles adapted from cognitive behavioural therapy (CBT). A central and important aim is to improve psychological resources and mastery and reduce symptoms of depression. The CWS course evaluated in this thesis was offered to all employees in four municipalities in Eastern Norway, and may be described as a universal intervention. However, in this PhD project, and consistent with ordinary practice in this kind of workplace intervention, only participants with minimal to moderate symptoms of depression were accepted onto the CWS course. In this project, 137 employees responded to an advertisement on the internal network in the four municipal administrations. The announcement provided contact information of the course leaders and there was information about the course itself as well as about the research project. The main groups of employees were nurses, school-nurses, nursing assistants, teachers, consultants, and secretaries in the public services. The final sample included 119 employees who were

randomized into two CWS groups. Shortly after the randomization, the intervention in the first CWS group started, and after six months the intervention in the delayed CWS group started. The delayed intervention group functioned as a control group during the first six months. Additional data collections were carried out on four occasions in both groups during four years after the interventions.

Linear mixed modelling was used for analysing intervention effects (articles 1 and 2) and structural equation modelling (cross-lagged analysis) was used for the analysis of prospective associations between social support, generalized self-efficacy and depression (article 3).

The CWS course seems to have succeeded in reducing symptoms of depression, and the effect was maintained during the four-year follow-up period, although weakening slightly, towards the end (paper 1). The CWS course appears to increase generalized self-efficacy, self-esteem and vitality among participants and the effects are maintained over a period of four years, however, again weakening slightly towards the end (paper 2). Results presented in the third article show that self-efficacy and social support predicted change in symptoms of depression prospectively (paper 3).

In the bigger picture, the three papers in this thesis may contribute to more effective workplace interventions for the promotion of mental health and prevention of mental ill-health, and also contribute to more interest in research on effects of workplace interventions. Since there are presently few evidence-based interventions available for the promotion of mental health in workplaces, more studies which can throw light on the efficacy and effectiveness of such interventions are needed. Also, more research on the interrelatedness of factors of importance for positive mental health in workplaces is needed. Employees will most likely always experience some degree of stress and uncertainty. The focus on psychological resources and mastery may prove to be an important approach.

List of Papers

PAPER 1

Sælid, G. A., Czajkowski, N. O., Holte, A., Tambs, K., & Aarø, L. E. (2016). Coping With Strain course (CWS) - its effects on depression: A four-year longitudinal randomized controlled trial. Accepted with revision in *Scandinavian Journal of Psychology*.

PAPER 2

Sælid, G. A., Czajkowski, N. O., Holte, A., Tambs, K., & Aarø, L. E. (2016). Positive mental health effects of the Coping With Strain course (CWS) on employees: A four-year longitudinal randomized controlled trial. Submitted to and in review in *International Journal of Mental Health Promotion*.

PAPER 3

Sælid, G. A., Czajkowski, N. O., Holte, A., Tambs, K., & Aarø, L. E. (2016).

Interrelationships between self-efficacy, social support and symptoms of depression – cross-lagged modelling based on data from a study among Norwegian employees. Submitted to *Scandinavian Journal of Psychology*

1 Introduction

The aim of this introduction is to place the Coping With Strain (CWS) course and the evaluation of this course in a bigger picture by presenting some aspects that cut across the three papers. The main aspects are the definitions of mental health and ill-health, preventive and promotion interventions, and perspectives on why mental health is relevant to the workplace. Individual (personal) factors are placed within perspectives on what may constitute a mentally healthy workplace, because the CWS course aims to increase positive mental health and reduce ill-health on an individual level. The CWS course is mainly based on cognitive behavioural theory, and the contents of the textbook and manual that are used in the course are described in the last section of the introduction.

1.1 What is mental health and mental ill-health?

According to the World Health Organization (WHO), mental health is defined as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to her or his community” (WHO, 2007). Mental health is not merely the absence of mental health disorders or problems, but rather a state of well-being. This definition includes the three interconnected areas: physical, mental and social health. It includes concepts such as subjective well-being, perceived self-efficacy, autonomy, competence, and the achievement of one’s intellectual and emotional potential (WHO, 2004a).

Positive mental health is mental health conceptualized as positive emotions (affects) such as feelings of happiness, and person factors including psychological resources such as self-esteem and mastery (WHO, 2004b).

Mental ill-health has an impact on the individual’s quality of life and ability to function adequately. Many people may experience symptoms of emotional distress, which may not be of sufficient severity to warrant a diagnosis of a mental disorder, but nevertheless result in a significant degree of personal suffering and decreased productivity (WHO, 2005). These are often referred to as sub-clinical conditions or psychological distress. Mental ill-health is also frequently referred to in the literature as “mental health problems” or “mental health issues”, which suggests that the severity of symptoms or complaints is not sufficient to fulfil the criteria associated with a mental disorder (WHO, 2004a).

The main object of the CWS course is to promote positive mental health by empowering participants to cope with strain at work and in daily life. Most of the participants

in the project experienced mild symptoms of depression before the initial start of the CWS course, and therefore, the label “mental health problems” is utilized throughout the text to denote their mental health condition.

1.2 What fosters mental health in the workplace?

A person's mental health is affected by personal (level) factors and experience, social interactions, the environment, and societal expectations (WHO, 2004a). Each workplace will have a variety of mental health risk and protective factors and these factors will be connected to aspects and levels of organization and context (Harvey, Joyce, Tan et al., 2014). In general, a mentally healthy workplace can be conceptualized as one in which risk factors are acknowledged and appropriate actions are taken to reduce their potential negative impact on employees' mental health. At the same time, protective factors are fostered and maximized (Harvey et al., 2014).

Defining what makes a workplace mentally healthy for employees is complex and involves the consideration of the design of jobs, the composition and functioning of teams and a number of organizational factors (Harvey et al., 2014). At each level (person, group, organization, wider context), there are a range of risk and protective factors which can have an impact on the mental health of individuals. There is a diversity of factors that contribute to mentally healthy workplaces; however, most of these conditions should be present simultaneously in order to justify the label “a mentally healthy workplace” (Harvey et al., 2014). To discuss all of the factors of relevance is beyond the scope of this thesis. However, in order to address the position of the Coping With Strain (CWS) course in the diversity of workplace factors, some of the factors that are associated with the extent to which workplaces are mentally healthy, will have to be mentioned. Such factors are *job design* (demand control, resources and engagements, job characteristics and exposure to trauma), *team/group factors* (support from colleagues and managers, quality of interpersonal relationships and leadership), *organizational factors* (organizational changes, organizational support, recognition and reward, organizational justice, psychosocial safety climate, physical environment), along with *home and work conflicts* (conflicting demands and significant life events) and *personal level factors* (genetics, personality, life events, mental health history, cognitive and behavioural patterns) (Harvey et al., 2014).

1.2.1 Personal factors

The focus of the CWS course is on empowering participants, on promoting their mental health, and reducing ill-health at an individual level, and it is relevant in this thesis to illuminate personal or individual level factors.

There are several personal factors that are important to take into account in the context of mental health promotion. Such factors may be biological (e.g. genetic) and psychological (e.g. personality traits, cognitive and behavioural patterns). In addition, the interaction of a number of relevant social factors (e.g. social support, social stress, life events). It is important to understand the role of personal factors, in particular since some of these factors may be modifiable and relevant in this thesis. Cognitive behaviour-based interventions which aim to modify cognitive and behavioural patterns, seek to change the responses to potentially stressful situations in order to reduce the risk of adverse outcomes, such as mental ill-health (Harvey et al., 2014). These interventions will typically try to focus on unhelpful patterns of thinking or behaving, such as a tendency for catastrophic thinking or coping via avoidance.

Individuals bring with them resources and vulnerabilities that enable them to cope with or make them more sensitive to mental strains (Harvey et al., 20014). All of these factors interact with the range of work and non-work factors outlined above to influence an individual's mental health. Personal factors or biopsychosocial factors may include certain coping styles, and patterns of responses to stressful situations. Workplace mental health programmes may be suitable for individuals who would like to learn coping strategies and to cope better with strains.

There is increasing evidence which suggests that the impact of work-related risk factors on mental illnesses may only be understood when personal factors of mental health are considered (Harvey & Henderson, 2009). However, these factors have often been neglected when considering the impact that work may have on mental health. Risk factors and strains are likely to interact with other factors in complex ways, and caution should be taken when addressing mental health issues by isolating and addressing risk factors in just one area (Harvey & Henderson, 2009).

1.3 Why is mental health relevant to the workplace?

There are several reasons why mental health is relevant to the workplace. Examples are: the cost of mental illness (EU-OSHA, 2014), elevated levels of stress associated with

increased workplace demands (Sauter & Murphy, 2003), and stigma associated with mental illnesses and the reluctance to seek help (Pescosolido et al., 2010). Despite the relevance of addressing mental health issues among the employees, mental health has remained relatively ignored in the majority of workplace health programmes (Tan et al., 2014). When intervention programmes are offered in the workplace, there has commonly been no systematic evaluation and documentation of their effects (Oxman et al., 2010). In the following, two important points are to be dealt with: first, the prevalence of ill-health because mental health problems are common in the working population, and second, some of the factors that may increase strain at work and effects on mental distress of factors within and outside the workplace.

1.3.1 The prevalence of ill-health in the working population

Many employees may experience symptoms of emotional distress, which may not be of sufficient severity to warrant a diagnosis of a mental disorder, but nevertheless may result in a significant degree of personal suffering and decreased productivity (WHO, 2005a). Their level of psychological distress may have an impact on their quality of life and ability to function adequately (Office for National Statistics (UK), 2001). Subsyndromal and mild to moderate symptoms of depression contribute more than any other health condition to absence from work, active sick leave costs, and work disability pension in the welfare state (Foss et al., 2010, Knudsen et al., 2010; Henderson et al., 2005). Mental illness and mental ill-health are also associated with high levels of presenteeism, where an employee remains at work despite experiencing symptoms resulting in lower levels of productivity (Wang et al., 2004; Harvey et al., 2011).

One-sixth of the working age population suffers from symptoms of mental illness, most commonly depression and anxiety (Lelliott et al., 2008). Estimates suggest that more than 27% of adult Europeans experience at least one form of mental illness during a year, and by the year 2020 depression is expected to be the highest ranking disease in the developed world (European Communities, 2005; ENWHP, 2011). This creates huge costs to individuals, families, communities, businesses, the economy and society in general. Mental illness is the leading cause of sickness absence and work incapacity in most developed countries (Harvey, Henderson, Lelliott, & Hotopf, 2009; Henderson, Harvey, Overland Mykletun, & Hotopf, 2011) and depression is predicted to be the leading cause of work disability by 2020 (Mathers & Loncar, 2006).

1.3.2 Factors within and outside a workplace

Traditionally, workplace mental health has focused on how specific aspects of a job may cause mental health problems, e.g. burnout in nurses and priests in their respective jobs. However, we have included participants from different occupations in this PhD project, irrespective of the characteristics of their jobs. Therefore, more relevant in this thesis is a brief description of some of the common work-related and other risk factors that may contribute to increasing distress and mental health problems at work.

First, conflicting demands at work and at home can affect an employee's mental health (Casini et al., 2010), e.g. abuse and violence, marital distress, being a caregiver for a dependent child or an older person, or financial strain (Geiger-Brown, Muntaner, McPhaul, Lipscomb, & Trinkoff, 2007; Sandberg, Yorgason, Miller, & Hill, 2012; Brennan & Brannan, 2005; O'Donnell, Ertel, & Berkman, 2011; Okechukwu, Ayadi, Tamers, Sabbath, & Berkman, 2012). Caregivers often face difficulties such as absenteeism, exhaustion at work, and missed opportunities for career promotion (Schulz & Martire, 2004; Neal, Chapman, Ingersoll-Dayton, & Emlen, 1993). Such examples refer to pressures at home that can affect the individual at work. There is also evidence suggesting that, when the demands at home impact or spill over into work, this has an exacerbating effect on depression (Schieman, McBrier, & Van Gundy, 2003).

Second, stressful life events may also be the cause of disruption or spill over into an individual's work performance and employment, and this is one of several risk factors for developing depression (Bebbington, Hurry, & Tennant, 1988; Brown & Harris, 1978; Rijdsdijk et al., 2001). It has been suggested that negative life events are more important as risk factors prior to a first episode of depression, while subsequent episodes of depression become less related to life events (Paykel, Cooper, Ramana, & Hayhurst, 1996). Life events that involve loss and humiliation may be associated with a significant change in daily life and constitute a set of strong risk factors for depression (Brown, Harris, & Hepworth, 1995; Farmer & McGuffin, 2003; Hatch, Mishra, Hotopf, Jones, & Kuh, 2009).

Third, the diagnosis of a chronic or serious medical condition is another instance of a type of significant life event which may have an impact on the individual's employment (Turner & Kelly, 2000). Such adjustments may result in increased psychological distress, and may contribute to the onset of a psychiatric disorder (Harvey & Ismail, 2008). Research suggests that the combination of physical and mental illness is especially likely to lead to poor occupational outcomes (Knudsen et al., 2010).

Fourth, high levels of psychological demands and low levels of control, and low levels of decision latitude, *and low levels of social support* at work are significant predictors of subsequent depressive symptoms in both men and women (Niedhammer, Goldberg, Leclerc, Bugel, & David, 1998). Social support may be important in moderating the psychological consequences of adverse life events, e.g. those with limited social support are more likely to develop depression following a stressful event (Brown, Andrews, Harris, Adler, & Bridge, 1986). Although spillover of family strain into work can have negative consequences, it is an important notion that family may also enrich work and work can enrich family life (Greenhaus & Powell, 2006).

1.4 Introducing the concepts of prevention and promotion

The original public health classification system of disease prevention was proposed by the Commission on Chronic Illness (1957). There are, however, complex interactions regarding risk and protective factors on illness, and today's research has advanced the knowledge of risk factors and health outcomes. The earlier scarcity of knowledge of how risk factors are associated with the onset risk of illness sometimes led to the pessimistic view that prevention efforts are futile (Mrazek & Roberts, 1994).

Gordon (1987) was, however, convinced otherwise; that practically oriented disease prevention and health promotion programmes could be based on empirical relationships, and this led him to propose an alternative classification system for physical disease prevention (Gordon, 1987, 1983). Gordon's system consisted of three categories: universal, selective and indicated. However, neither the original public health classification system nor Gordon's classification system were designed for use in the field of mental illness prevention. The leading classification system in intervention research today was developed by the Committee on Prevention of Mental Disorders, Mrazek and Haggerty (1994) at the Institute of Medicine, who actually adapted Gordon's three classes of preventive action and used "universal", "selective" and "indicated" in their own, more comprehensive conceptual framework. The classification system recognizes the whole spectrum of interventions for mental illness; from prevention, through treatment, to maintenance. Mrazek and Haggerty also describe the utilization of mental health promotion.

1.4.1 Universal, selective and indicated interventions

Universal preventive interventions are targeted at the general public or a whole population group that has not been identified on the basis of risk. This includes programmes designed to prevent distress (Mrazek & Haggerty, 1994). The Coping With Strain (CWS) course might be interpreted as a universal intervention, because it is offered to all employees after advertisement in the workplace. However, severely depressed individuals (according to the Beck Depression Inventory assessed at the first meeting with the course leader), are not offered CWS, neither in the intervention examined in this thesis, nor in other implementations of CWS. CWS may also not be recognized as a universal intervention by all researchers, since the recruitment involves a self-selection process. We might for instance assume that those who want to participate in a course aiming at reducing distress constitute a group with higher than average levels of symptoms of depression. Similar interventions have, however, been labelled “universal” when they have initially been presented and offered to all employees (Tan et al., 2014).

Selective preventive interventions are targeted at subgroups of the population whose risk of developing mental disorders is significantly higher than average. Risk groups may be identified on the basis of biological, psychological, or social risk factors that characterize members of the group or category in question, and are known to be associated with the onset of a mental disorder (Mrazek & Haggerty, 1994). Many participants in the intervention studied in this thesis experienced severe strains and mild depression, but since the intervention was offered to a broad audience, without any initial selection based on an assessment of risk, it still makes sense to call it a universal intervention.

On a general basis, indicated preventive interventions target individuals who have been identified because they, as individuals, have elevated risks of developing a mental disorder. Their progression towards disorder is, however, still at an early stage, and not sufficiently severe to merit a diagnosis of a mental disorder. Additionally, the aim of indicated preventive interventions is to reduce the length of time that early symptoms continue and to halt a progression of severity before they meet diagnostic levels (Mrazek & Haggerty, 1994). And moreover, not only hindering an increase in symptom level, but actually bringing about a reduction, might contribute to reducing the risk of developing a disorder. However, we (the researchers in this PhD project) have not pursued clinical interviews of the participants in the CWS course and diagnosed mental disorder. We have tested the CWS course “in real life”; as it is utilized in workplaces for all employees who would like to cope better with strains. Mrazek and Haggerty (1994) conclude that, if individuals are chosen for a preventive

intervention because of early psychological symptoms, by definition the intervention is an indicated one. We have, however, done the opposite; none were chosen because of early symptoms. Instead all individuals interested in joining a CWS course were welcome to participate, except individuals with a burden of symptoms indicating a clinical depression. Indicated preventive interventions are often referred to by clinicians (Mrazek & Haggerty, 1994).

The overall aim of the prevention of mental illness, according to the presented classification system, is to cover primary prevention action only. This includes reducing the occurrence of new cases and delaying the onset of illness or disorder (short-term or long-term). Although the classification system has deficits and definitional problems, and it is sometimes difficult to distinguish clearly between the three types of preventive interventions, it is useful to have such a system for classification of interventions.

Certainly, depending on the research questions, the outcomes of the CWS courses could be examined in the light of Mrazek and Haggerty's definitions of preventive interventions. And reviewers in scientific journals examining papers included in this thesis have stressed the need for applying the Mrazek and Haggerty classification system. However, this thesis has not tested the reduction of the occurrence of new cases of diagnosed disorder, the delay of onset of mental illness, or the decrease of risk of diagnosed depression. This thesis has only tested to what extent there has been a reduction in distress (symptoms of depression) (paper 1), an increase in positive aspects of mental health (vitality, self-esteem and self-efficacy) (paper 2), and prospective patterns of associations between levels of depression, self-efficacy and support (paper 3).

1.4.2 Mental health promotion interventions

In the context of this thesis, CWS is understood as not only an intervention aimed at preventing disorders and reducing levels of distress, but also an intervention that promotes positive mental health. Mrazek and Haggerty (1994) mention health promotion interventions, but have not included mental health promotion in the classification system of preventive interventions. This is because mental health promotion is conceptualized as not emphasising illness, but rather focusing on the enhancement of well-being. Health is, however, much more than the absence of disease. The aim of health promotion is to enhance competence, self-esteem and sense of well-being, rather than to intervene to prevent psychological problems or disorders in individuals, groups or populations. The conceptualization of the promotion of

mental health has definitional problems, similar to the conceptualization of prevention, because it means different things to different people (Mrazek & Haggerty, 1994). Mrazek and Haggerty (1994) cite Sartorius (1988, p. S3); “For some, it means the treatment of mental illness; for others, it means preventing the occurrence of mental illness; and for others, promotion of mental health means increasing the ability to overcome frustration, stress, problems, enhancement of resilience and resourcefulness”. The same cognitive behavioural intervention approach may be used to enhance personal harmony and well-being, as well as to prevent depression. Such differences have far-reaching implications for why people participate in them and what they expect to gain (Mrazek & Haggerty, 1994, p. 334). Mostly, individual protective factors are identical to features of positive mental health, such as self-esteem, feelings of mastery, emotional resilience, positive thinking, problem-solving and social skills and stress management skills. For this reason, preventive interventions aiming to strengthen protective factors overlap largely with mental health promotion (WHO, 2005, p. 20).

1.5 Cognitive behavioural therapy (CBT) based interventions

1.5.1 The theoretical foundation of CBT

A closer examination of the literature on workplace mental health reveals that there are several areas of research focusing on enhancing personal ability to cope with strains; e.g. Coaching and mentoring, Worksite programmes, and Problem solving, and Stress Management Interventions (SMI). This thesis does not address the whole range of such research, but focuses on interventions similar to the Coping With Strain (CWS) course. This means interventions based on Cognitive Behavioural Therapy (CBT).

Therapies under the umbrella of Cognitive-Behavioural Therapy (CBT) are Rational Emotive Behaviour Therapy, Schema Therapy, Problem-solving Therapy, Mindfulness, Acceptance and Commitment Therapy, and Cognitive Therapy. The Coping With Strain (CWS) course is, according to the textbook on CWS (Børve, Nævra, & Dalgard, 2009a) and the course leader manual (Børve, Nævra, & Dalgard, 2009b), mainly based on Cognitive Therapy. This chapter will therefore address Cognitive Therapy.

Cognitive Therapy was introduced by Aron T. Beck in the 1960s (DeRubeis, Webb, Tang, & Beck, 2010, p. 277), and has grown steadily in its influence on clinical psychology, and also on social work, nursing, psychiatry and other professions where education in evidence-based treatment is practised. The underlying theory and understanding of

mechanisms in operation in cognitive therapy have undergone steady growth. While operating initially from a classical Freudian perspective, Beck turned the focus more on the content of the depressed person's negative thinking. His early descriptions included common negative biases and distortions that he found among depressed patients (DeRubeis et al., 2010, pp. 277-278).

Cognitive therapy assumes that the information processing of a depressed person is distorted, which may result in a consistently negative self-perspective, and a negative view of the future and the world. These cognitive processes are presumed to underlie the behavioural, affective and motivational symptoms of depression. To understand the nature of an emotional disturbance or episode, the cognitive model focuses on the cognitive content of one's reaction to an event, e.g. preconscious or conscious thoughts. The assumption is that not only depression, but also anxiety, motivation and other mental health outcomes are related to concerns in the beliefs reported by the individuals, e.g. beliefs about one self, the future and the world (DeRubeis et al., 2010, pp. 277-278).

To be more specific, a distinction between “three major classes of CBT therapies”, each with a different set of aims of goals, has been suggested. These classes are Coping Skills Therapies, Cognitive Restructuring Methods and Problem-Solving Therapies (Dobson & Dozois, 2010, pp. 6-7). The different classes of therapy orient themselves towards different degrees of cognitive versus behavioural change. The relationship between CWS and the first two classes will be briefly mentioned in this thesis; Coping Skills Therapies are primarily used for problems that are external to the individual. The primary markers of success involve behavioural signs of improved coping abilities and consequences of events, and this seems to be in accordance with the aims of the theory behind the CWS course (Børve et al., 2009a). However, Cognitive Restructuring techniques are used when the disturbance is created from within the individual, because of learned rules of how to behave, feel and think (from parents, themselves or others, in Norwegian “leve-regler”). Such approaches focus on the long-term beliefs and situation-specific automatic thoughts that engender negative outcomes (Dobson & Dozois, 2010, pp. 6-7). The course leaders discussed these approaches with the participants in the CWS course and these aspects are profound and important elements in the CWS course (Børve et al., 2009a).

1.5.2 Empirical support for CBT theory

Workplaces should be proactively prepared to deal with the strains employees experience at work by increasing workers coping skills and personal resilience. Recent reviews report that

such interventions contribute to reducing a range of work-related problems, and that there is more evidence for the effectiveness of CBT-based programs than for other interventions (Corbière, Shen, Rouleau et al., 2009; Czabała, Charzyńska, & Mroziak, 2011; Tan et al., 2014; Odeen et al., 2013; Martin et al., 2009).

Hence, CBT has been widely adopted as the preferred approach to workplace health promotion, and is also one of the most commonly used psychotherapies in adults (Leichsenring, Hiller, Weissberg, & Leibing, 2006). The outcome most often examined has been levels of depression. CBT assessed as individual or group therapy is effective in reducing the incidence of major depression in a diversity of target groups, and several meta-analyses and studies have been published over several decades (e.g. Dobson, 1989; Gloaguen, Cottraux, Cucherat, & Blackburn, 1998; Rohde, Clarke, Mace, Jorgensen, & Seeley, 2004; Rosselló, Bernal, & Rivera-Medina, 2012).

There is empirical support that cognitive appraisals of aversive events can affect the responses to those events, and that there is clinical value in modifying the content of these appraisals (e.g. Dobson & Dozois, 2000; Dozois & Beck, 2008; Granvold, 1994; Hollon & Beck, 1994). However, there is still a debate about the processing of such appraisals (e.g. Coyne, 1999; Held, 1995), and whether it actually contributes in reducing the risk of developing depression (Cristea et al., 2015).

1.6 The Coping With Strain (CWS) course

The CWS course is a modification of the Coping With Depression course (CWD) (Lewinsohn, Weinstein, & Alper, 1970; Lewinsohn, Antonuccio, Steinmetz, & Teri, 1984; Muñoz & Ying, 1993). CWD is by far the most studied psycho-educational intervention to reduce and prevent depression (Cuijpers, Muñoz, Clarke, & Lewinsohn, 2009; Muñoz et al., 2014). The Norwegian version of CWD, from which CWS was developed, has been shown to be effective in reducing symptoms of unipolar depression with sustained effect at 12 months follow-up (Dalgard et al., 2006). CWD has never been tested in a randomized trial in the workplace, prior to the papers included in this thesis.

The Coping With Strain (CWS) course for employees has two purposes; to bring about an understanding of the normality of having mental problems and to use CWS as a tool to reduce ill-health, e.g. symptoms of depression. There are a textbook for participants and a manual for course leaders. The use of the textbook and the manual are restricted by copyright and are only available to course leaders and participants in CWS. The availability of the

course leader manual is restricted to authorized course leaders only, and the textbook must be purchased by the employer. The descriptions of CWS presented in this thesis therefore do not include details of the materials, the tables or figures. The following description is presented with permission from the owners of the CWS programme (Anne Nærva and Trygve Børve).

1.6.1 The textbook

The textbook “The Coping With Strain course (CWS) – a course based on cognitive methods” (Børve et al., 2009a), consists of 10 chapters (91 pages). There is one chapter for each of the ten sessions. The theoretical foundation is presented as mainly based on cognitive behavioural theory (CBT), e.g. Aaron Beck and Albert Ellis. The target group for CWS is presented as “for those who want to strengthen their ability to regulate and cope with strains”. The strains might be due to health impairments or related to work or to aspects of personal life. There are lists of strains, such as: low support from management/colleagues, lack of ability to confront situations, low control of the working situation, conflicts with colleagues and/or management, conflicts with family members, role conflicts, loss of a close friend or a family member, health problems and economic problems. The goal for participating in the CWS course is to identify and recognize signs of strains, prevent overloads, and develop the ability to cope with such strains. Every session starts with repeating some of the main themes from the last session.

The ten chapters are divided into three domains, where the first domain is covered by the first four chapters. Some examples of the information included in the first domain are: information about strains, consequences of strains, coping resources, the basic elements in CBT such as the A-B-C model, cognitive interpretations and errors, disputing the cognitive interpretation style and techniques to create changes, the benefits of creating changes, identify “life-rules” (such as finding the sources from early experiences on why the participants have self-disturbing thoughts), how to believe more in rational thoughts, and homework assignments, e.g. register the A-B-C model or register moods three times a day.

The main theme in the second domain is the benefits of activities; how to increase the occurrence of pleasant activities, how pleasant activities might impact mental health, and how one can increase contact with other people. There is information about the homework assignments, e.g. how to register the A-B-C model to identify thoughts and feelings, disputing thoughts and feelings, create cognitive and behavioural changes, e.g. more rational thoughts, and increase positive and pleasant activities. Further, in the last domain, the experiences of

participation are discussed with the course leader (e.g. difficulties with the home assignments) and the essence of CWS is revisited.

1.6.2 The course leader manual

The standardized course leader manual starts by addressing the target groups for CWS, which includes employees on sick leave, employees not on sick leave, unemployed, and others that want to strengthen their coping abilities (Børve et al., 2009b). The manual guides the course leaders (at the first meeting with each of the participants) on the exclusion criteria for CWS. All participants are asked to complete the Beck Depression Inventory at the first meeting, and there is a guide in the interpretation of the scores. Individuals who are severely depressed (according to the Beck Depression Inventory), are looking for treatment for depression or have suicidal risks, should be excluded and referred to clinical treatment. On the basis of the conversation, the course leader evaluates each candidate participant individually on motivation, ability to concentrate, and amount of strains. Further, the manual gives general information about strains, depression, burnout, cognitive theory and information on how to teach in a group of people. There is guidance on each of the ten chapters that are synchronized with the textbook for the participants. In addition to teaching the CWS materials, the course leader invites the participants to discussions. CWS is not advertised as therapy, and the participants are told at the first session that it is voluntary to tell the rest of the group why they have chosen to participate in the CWS course.

2. Study aims

The original aims of the project were to examine several outcome measures; burnout, depression, self-efficacy, quality of life, self-esteem, social support, negative life events and sick leave. This is a rather broad range of outcomes, all relevant to the evaluation of the CWS.

The aims in the two first papers were to evaluate the effects of participating in the CWS course on symptoms of depression (paper 1) and on vitality, self-efficacy and self-esteem (paper 2). The third paper examines prospective longitudinal interrelationships among factors that are assumed to be causally related to each other, thereby throwing light on interpersonal and personal processes assumed to take place among course participants. It is assumed that self-efficacy and social support would be negatively associated with subsequent changes in depressive symptoms (paper 3).

In *Paper 1* we tested the effect of the CWS course during and after participation, and the long-term effect over four years. We wanted to investigate whether the CWS course was effective in reducing symptoms of depression among employees, and whether the effect was maintained for four years, using linear mixed models.

In *Paper 2* we tested whether participation in the CWS course delivered at the workplace strengthened the employee's self-esteem, self-efficacy and vitality in the short term and the long term (four years), also using linear mixed models.

In *Paper 3* we examined the relationships among symptoms of depression, self-efficacy and social support with a cross-lagged model, testing whether there was any evidence for the assumptions of causal relationships between these factors.

3. Materials and methods

3.1 Collection of data

The collection of data, prior to the initial start of the PhD period, started in 2008 and ended in 2012.

3.1.1 The steps in the process

The PhD student organized this project in several steps:

- wrote the project description/research proposal (together with two of the supervisors; co-supervisor Arne Holte, and now retired main supervisor Jon Martin Sundet)
- applied and received funding (from the Norwegian Directorate of Health and The Norwegian Labour and Welfare Administration for the data collection process, while the PhD project is financially supported by the Norwegian Extra Foundation for Health and Rehabilitation through EXTRA funds)
- applied and received approval from the National Committee for Research Ethics (REK) in South-East of Norway to conduct the project
- contacted approximately 200 course leaders of the Coping With Depression (CWD) course by e-mail or phone
- advertised (together with the owners of the CWD course) a seminar in CWS to offer CWD course leaders a certification in CWS

- picked out, together with colleagues at the NIPH, the questionnaires to be used in the evaluation of the intervention
- developed the questions on sick leave, medicine use and other treatments (by psychologist), and the evaluation of the course (user satisfaction)
- produced a standardized advertisement for the CWS course and the research project, which the course leaders gave to the IT administrator of the internal network of the municipality
- produced three standardized brochures/flyers; one for employees (to be given to employees by course leaders), and one for their managers, and one cost-benefit analysis (with assistance from a health economist) with calculations of the expected benefits for organizations of allowing their employees to participate
- distributed (by hand and/or by mailing) the questionnaires to the course leaders
- collected the questionnaires – by driving to pick them up by hand or receiving them by post
- randomized the participants to the first intervention group or the delayed intervention group, and informed the course leaders
- trained two research assistants in entering the data into SPSS
- established network-based questionnaires
- distributed questionnaires by e-mail (hyperlinks) or by post for follow-up data collections (the first two of the four data follow-ups were performed by research assistants)
- merged all the data into one SPSS data file

3.1.2 Organizing the course leaders

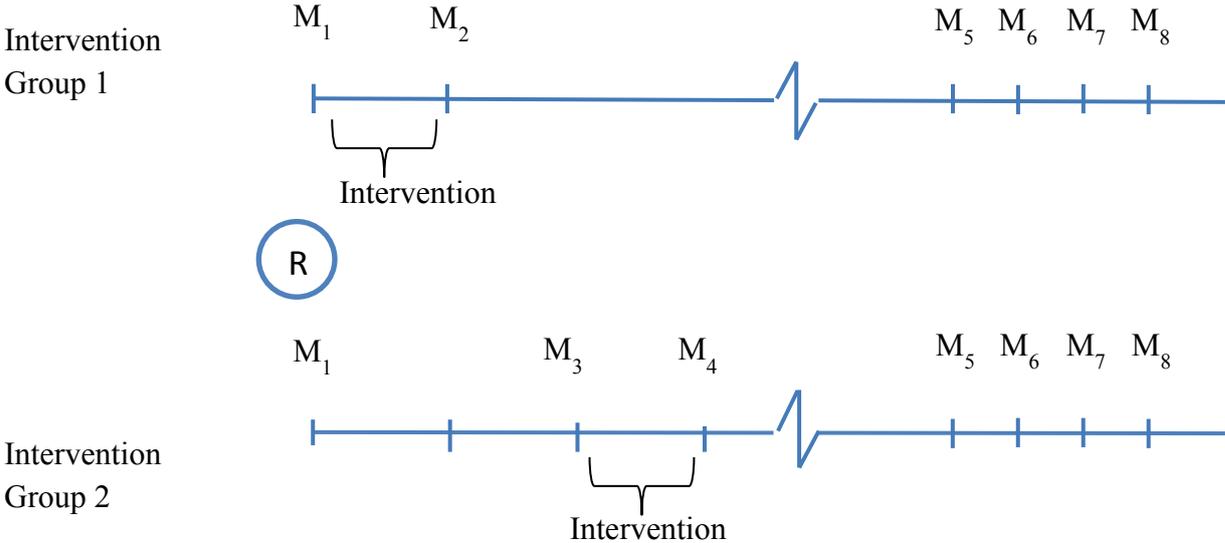
The list of CWD-certified course leaders consisted, at the start of the data collection, of 600 names. However, the list was not up-to-date, and the PhD candidate phoned many of the course leaders in eastern districts of Norway to inform them about the CWS seminar and the research project.

Thirty CWD course leaders attended the CWS seminar, held by one of the owners of the CWS course. Even though all the course leaders had agreed to participate in the project after the CWS seminar, actually only six course leaders did. Five of these six had non-certified CWS partners, “co-course leaders”, to assist them, and therefore as many as eleven course leaders are mentioned in the acknowledgements. The course leaders and co-course

leaders who conducted the interventions and collected data in this project were working in public services in one of four municipalities in eastern Norway. All of the course leaders had previously held the CWD course in their municipalities. Their employers continued to pay their salary for the time they spent on participation in this project.

3.1.3 Time points of collecting data

An overview of interventions and measurement waves (the original study design) is shown in Figure 1. Before participating in the CWS course, the employees were invited by the course leader to meet individually for a structured interview and to complete questionnaires (measurement one - M₁). Each participant was randomly allocated to one of two equally large groups. Intervention group one (IG1) started the course after the first meeting (M₁) and finished eight weeks later (M₂). Intervention group two (IG2) started the course on average six months after the start of IG1. Participants in IG2 were assessed with questionnaires again at the beginning of their course (M₃) and on the last day of the course, eight weeks later (M₄). After the two interventions had been completed, the follow-up period started. In the follow-up period, the participants received questionnaires by e-mail or post eight months after the course ended (M₅). At the three last follow-ups, all participants received questionnaires at the same time every year; approximately two years after the course ended (M₆), three years after (M₇) and four years after (M₈).



R – randomization;
M₁₋₈ – measurements

Figure 1. Study design

3.2 Sample

All public-service employees in four municipalities in eastern Norway received information about the project on their internal network, on banners and flyers, and were invited to participate. There were 137 employees who responded to the advertisement. At the individual meeting with the course leader, prior to the first day of the CWS course, each employee was assessed using the first questionnaire. The Beck Depression Inventory (BDI) measures the degree of severity of depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and at the first individual meeting was utilized in the process of including participants or excluding non-eligible candidates for course participation. Individuals who were able to participate in either the first or the second intervention group after the randomization process were included, as well as individuals with minimal to moderate symptoms of depression (according to the Beck Depression Inventory (BDI)). As many as 18 employees were excluded (before the start of the course), which resulted in a sample of 119 participants. The individuals who were excluded did not meet the inclusion criteria; three were severely depressed and were referred to clinical treatment (had severe depression according to the BDI scores, suggestive of clinical depression); four were hospitalized or sick because of other illness and were not able to participate at the given time; eight individuals expressed lack of interest after discussing the content of CWS at the first meeting with the course leader (“CWS is not suitable for me” or “I thought it was more of a self-development course”). Three individuals were excluded for “other reasons”.

The main groups of employees were nurses, school nurses, nursing assistants, teachers, consultants and secretaries in the public services. Both individuals on paid sick leave and individuals not on any sick leave were invited to participate. The final sample consisted of 119 individuals; 59 in IG1 and 60 in IG2:

In IG1, the age-groups were 4 (7%) participants aged 20-30 years, 16 (27%) aged 31-40 years, 19 (32%) aged 41-50 years and 20 (34%) aged 51-60 years. 40 (68%) participants had three years or more of higher education; 23 (39%) participants were on paid sick leave; 15 (26%) in treatment by a psychologist; 12 (21%) used anti-depressive medicine.

In IG2, the main age-groups were 4 (7%) participants aged 20-30 years, 11 (18%) aged 31-40 years, 21 (34%) aged 41-50 years, 20 (33%) aged 51-60 years and 4 (8%) aged 61-70 years; 36 (60%) participants had three years or more of higher education. 25 (42%) participants were on paid sick leave; 10 (18%) in treatment by a psychologist; 12 (21%) used anti-depressive medicine.

There were no significant differences between the two intervention groups regarding the characteristics of the sample with regard to age, level of education, treatment by psychologist and use of anti-depressive medication.

The sample of 119 participants in this project consisted of employees without severe depression according to the BDI scale. However, we do not know the psychiatric history of the participants, and whether some of the participants had been diagnosed with a mental disorder despite mild or moderate symptoms of depression at the time they were recruited into this project. The decision of not asking the participants about mental disorders is based on the aim of this project, which is to evaluate the CWS course regardless of the participant's psychiatric background. Participants might also feel stigmatized by being confronted with such questions. This is in line with ordinary practice when the course is administered in workplaces.

3.3 Measures

The entire questionnaire is shown under “Appendix I; The questionnaire”. The first page of the questionnaire includes questions about age, education, medicine use, psychological treatment, and whether the participant was on sick leave. There were two versions of the first page, one for participants on sick leave and one for participants not on sick leave (See Appendix). The purpose of having two versions was to avoid participants not on sick leave feeling stigmatized, if assuming they were on sick leave on their first meeting with the course leader (M_1). The same questionnaire was given on all the measurement occasions, however, the items on the first page changes after the participation. Both subgroups were asked whether they were on sick leave – to identify increases or decreases in proportions on sick leave. At the last day of the course, the participants were asked to report their satisfaction with the course (evaluation form). The evaluation form and the first page of the questionnaire across measurement occasions are given in Appendix II.

3.3.1 Depression (Paper 1 and 3)

The degree of severity of depression in this project was assessed using the Beck Depression Inventory (BDI) (Beck et al., 1961). In the context of this PhD project, the scale is meant to indicate symptoms of minimal to moderate depression, without necessarily drawing out levels of symptoms corresponding to the severity of a clinical diagnosis. However, the concept “depression” carries with it connotations and multiple meanings (Monroe & Anderson, 2015),

which in turn contribute to ongoing debate about its nature and classification (Cole, McGuffin, & Farmer, 2008; Parker, 2014).

BDI contains 21 items, each with response categories coded with numbers from 0 to 3, where a high score indicates a high degree of depression. Examples of response categories are: “I don’t feel sad” (0), “I do feel sad” (1), “I am sad all the time and I can’t let the feeling go” (2), and “I am so sad and miserable that I can’t stand it” (3). A BDI score in the range 0-9 indicates minimal depression, 10-18 indicates mild depression, 19-29 indicates moderate depression, and 30-63 indicates severe depression. (see “Appendix I; The questionnaire” and BDI starts at “B)” on page 2-5).

BDI has demonstrated high validity and reliability, and most of the researchers report Cronbach’s alpha on average higher than 0.75 (Richter, Werner, Heerlein et al., 1998). Analysis of the BDI inventory in our data showed high reliability, with Cronbach’s α across the measurement waves ranging from 0.87 to 0.92.

3.3.2 Self-efficacy (Paper 2 and 3)

Self-efficacy may be one of the mechanisms in coping (Saarni, 1999) which can influence the response to negative events and stressors (Bandura, 1997). The general construct of self-efficacy refers to the belief that an individual has in their ability to execute a task and therefore the ability to obtain the desired outcome (Bandura, 1997). Self-efficacy was measured by the Norwegian Version of the General Perceived Self-Efficacy Scale (Røysamb, Schwarzer, & Jerusalem, 1998). Self-efficacy was first described by Bandura (1977). Jerusalem and Schwarzer (1992) originally developed the scale used in this thesis. The ten items are scored from 1 to 4, where 1 is “completely untrue” and 4 is “completely true”. A high score indicates a strong belief in one’s own coping ability. Examples of questions are: “I can always manage to solve difficult problems if I try hard enough” and “It is easy for me to stick to my aims and accomplish my goals”. (see “Appendix I; The questionnaire” and the items starts at “F)” on page 9-10).

The scale has been shown to have high validity and reliability across contexts and cultures (Luszczynska, Scholz, & Schwarzer, 2005). Results from samples from 23 nations showed Cronbach’s alphas ranging from 0.76 to 0.90 (with the majority in the 0.80s) (Schwarzer & Jerusalem, 1995). Cronbach’s α estimates based on data from the present project, ranged from 0.84 to 0.93 across measurement occasions.

3.3.3 Self-esteem (Papers 2 and 3)

Self-esteem – the feeling of being valuable and important (Blascovich & Tomaka, 1991) – was measured by the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965). RSES contains five positively and five negatively phrased items. The response categories are from 1 to 4; “strongly agree”, “agree”, “disagree” and “strongly disagree”. The scale ranges from 0-30. Scores between 15 and 25 are within the normal range, while scores below 15 suggest low self-esteem. Examples of questions are: “I feel that I have a number of good qualities” and “I feel I do not have much to be proud of”. The full questionnaire is found in the Appendixes, and starts at. (see “Appendix I; The questionnaire” and the items starts at “G”) on page 10-11).

RSES possesses high validity and reliability (von Soest, 2005). Cronbach’s α ranged from 0.87 to 0.92 across measurement occasions.

3.3.4 Vitality (Paper 2)

Vitality – the level of energy/fatigue (Ware & Sherbourne, 1992) (four items) and Mental Health Perceptions (five questions) were measured using a subscale of The Short Form-36 (SF-36) Health Survey (Ware & Sherbourne, 1992). The subscale combines scores on vitality and mental health. Examples of items are: “How often during the last four weeks have you: felt calm or harmonic” and “... had much energy”. The subscale has nine items scored 1 (not at all) to 6 (all the time). (see “Appendix I; The questionnaire”, starting from the middle on the next page (page 6-7), under “C”). The scale has been shown to have high validity and reliability across contexts and cultures (Ware, Snow, Kosinski, & Gandek, 1993; Ware, 2000). In this project, Cronbach’s α varied from 0.83 to 0.92 across all measurement points.

3.3.5 Social support (Paper 3)

Social support – perceived general support – was measured with The Oslo-3 Social Support Scale (OSS-3) (Dalgard et al., 2006b). Social support may be defined as: ‘a flow of emotional concern, instrumental aid, information, and/or appraisal between people’ (House, 1981, p. 26). An example of one of the questions is: “How many people are so close to you that you can count on them if you have personal problems”. The response categories are: ”none”, ”1 or 2”, ”3-5” and ”6 or more” (Dalgard et al., 2006b). (see “Appendix I; The questionnaire”, starting from the middle of page 7, under “D”).

The scale has been used in several studies, which confirms its feasibility and predictive validity with respect to psychological distress (Dalgard et al., 2006b; WHO Regional Office for Europe: EUROHIS, 2003; Korkeila, Lehtinen, et al., 2003). Internal consistency reliability (alpha) is not suitable for measures like social support, but “test-retest” correlations for an adjacent observation across all measurement times, ranged from 0.66 to 0.92. These values are under-estimates if used directly as estimates of test-retest reliability because of the long time period between some of the measurement times. Nevertheless these results demonstrate a satisfactory reliability.

3.3.6 Variables not used

The three papers in this thesis did not report data on burnout, quality of life (other than vitality), negative life strains or the findings from the evaluation form. Additionally, the papers did not report changes in sick leave, medicine use or psychological treatment.

Burnout – is defined as a syndrome of emotional exhaustion, cynicism or depersonalization, and reduced professional efficacy (Maslach, Schaufeli, & Leiter, 2001). Burnout was measured by the Bergen Burnout Indicator (BBI). BBI is a simplified version of Maslach’s Burnout Indicator.

SF-36 - Quality of life covers positive aspects of the health concept. Only vitality (e.g. energy, tired) was utilised; excluded scales were social functioning (social-extent, social-time), role-emotional (e.g. cut down time, accomplished less) and mental health (e.g. happy, nervous).

Negative life strains measures negative life strains during the last six months. The scheme is usually used with measures of depression, because it indicates a risk of developing depression (Dalgard et al., 2006b).

Evaluation form: On the last day of the course (M₂ in the intervention group and M₄ in the delayed intervention group), all participants received an evaluation form and were asked whether they were satisfied with the course and the course leaders, and whether they felt the course was helpful.

3.4 Statistical analysis

Nicolai Czajkowski assisted in conducting the linear mixed models and structural modelling. The PhD candidate was involved in all the discussions on the statistical analyses.

Initially the repeated measures were analyzed with ANOVA and t-tests to examine the effect of the CWS course in Paper 1. However, few participants responded on all measurement occasions, and this resulted in a low number of participants with complete data in the analyses. Additionally, the amount of missing data varied over measurement occasions, but was particularly high at M₅ due to technical problems during handling of data after data collection. The technical problems at M₅ were mainly due to errors in the hyperlinks. There were, however, missing observations at each measurement occasion. As a consequence of relatively high levels of non-response at some measurement occasions, there were difficulties in choosing a proper statistical analysis for the outcome papers. We needed a flexible statistical approach that could handle missing entries with data containing repeated observations. Mixed linear models were therefore a reasonable choice for articles 1 and 2. A mixed linear models approach allows for modelling changes (linear and non-linear) over the whole time period, while simultaneously utilizing all available information in the dataset.

In article 3, which does not examine effects of interventions, but rather the prospective, longitudinal, reciprocal interrelationships among three variables, cross-lagged structural equation modelling was a sensible choice.

The first measurement in the study design (M₁) and the first course day (M₃) in the delayed intervention group (IG2) was not utilized in the analysis in paper 3, because we wanted to investigate the prospective, longitudinal relations among the relevant variables after participation in the course. Therefore, we analyzed the data from M₂/M₄ to M₈ only. The first follow-up (M₅) was discarded from the analysis in paper 3, because of a low number of respondents (13 individuals). However, in order to reduce confusion with regard to the time line, the data collection occasions in paper 3 have been renamed as follows: t1= the last day on the CWS course; t2 = the second follow-up; t3 = the third follow-up; t4 = the fourth follow-up.

Papers 1 and 2. The data were analyzed using linear mixed models - also referred to as multilevel models - in SPSS 20.0 (SPSS, I., 2011) and R 3.1.2 (R Core Team, 2015). The participants who dropped out by not responding on the questionnaires were not excluded from the analysis as in repeated measures with ANOVA. Multilevel modelling is a flexible

statistical approach that can handle non-balanced data with missing entries and repeated observations (Jackson, 2010; Kwok et al., 2008).

All models in papers 1 and 2 were fitted using full information maximum likelihood estimation and an unstructured covariance matrix for the random effects. Three linear mixed models were fitted to the data in each of the papers. In the baseline model, only fixed and random intercepts were included, allowing depression levels to vary across participants (paper 1) and allowing vitality, self-efficacy and self-esteem levels to vary across participants (paper 2), but not across time. In model 2 in both papers, the effect of time was added, while in model 3 it was assessed whether a specific effect of the CWS course significantly improved model fit beyond what can be accounted for by the passage of time.

An important consequence of including a delayed intervention group is that it allows us to differentiate between the reduction in depressive symptoms (paper 1) - and to differentiate between the increase in vitality, self-efficacy and self-esteem (paper 2) - that can be attributed to the CWS course, and that can be attributed to the passing of time in the absence of an intervention. Specifically, changes in levels of depressive symptoms (Paper 1) and changes in levels of vitality, self-efficacy and self-esteem (paper 2) in the intervention group over the 8 weeks that the course lasted can be thought of as the summed effect of the intervention and the change that would have occurred even in the absence of an intervention. In order to disentangle these two sources of influence, we differentiated between time elapsing before the intervention was completed (referred to as “pre-completion time”), and time afterwards (referred to as “post-completion time”). Pre-completion time was defined as running from M_1 until the last day of the course, to M_2 and M_4 for the participants in the intervention and delayed intervention groups, respectively, while post-completion time was defined as time passed from the last day of the course and until the end of the assessment period.

Large samples often give significant results even when effects are small. While our sample size was modest, we also report pooled effect size (Hedges, 1981; Cohens, 1988) across the various time points to facilitate comparison with previous studies on alternative versions of CWD. The number of observations was too low to allow for estimation of intervention effects for men and women separately, and for participants on sick leave versus not on sick leave.

Paper 3. Path analysis using Mplus Version 7.3 (Muthen & Muthen, 2006) was used in order to carry out cross-lagged longitudinal analyses. The models included three observed

variables measured across the four relevant data collection occasions: depression, social support and self-efficacy. The model allowed cross-time, and within- and between variable paths, as well as correlation between the residuals for the three variables at each measurement occasion. As the stability across a single measurement wave is maintained by the autoregressive paths, failure to allow for some degree of stability with earlier waves in multi-wave studies can result in spurious estimates for cross-lagged paths. Paths from the first assessment to all subsequent ones for each of the three variables were therefore included. The correlation between the residuals at each measurement wave was also estimated.

Chi-Square Testing of Model Fit as well as the Comparative Fit Index (CFI) and the root-mean-square error of approximation (RMSEA) were utilized in the evaluation of the model fit. The RMSEA is a measure of the model fit that takes model parsimony into account, and the CFI provides a measure of the fit of a particular model relative to the null model. By convention it is considered necessary to provide a CFI value greater than 0.95 and a RMSEA value lower than .06 (Hu & Bentler, 1998).

4 Main findings

4.1 Results from Paper 1 on symptoms of depression

The degree of depression was assessed with the Beck Depression Inventory (BDI) (Beck et al., 1961). A substantial proportion of the participants had a BDI score indicating mild symptoms of depression at M_1 in both Intervention Groups. The BDI score indicates that 32 (37%) individuals in Intervention Group 1 (IG1) and 28 (47%) individuals in Intervention Group 2 (IG2) had mild symptoms of depression. Furthermore, 19 (32%) individuals in IG1 and 16 (27%) individuals in IG2 had a BDI score indicating minimal symptoms of depression at M_1 . Fewer of the participants were found to suffer from moderate symptoms of depression; 16 (27%) individuals and 13 (22%) individuals, respectively, and severe symptoms of depression; 2 (3%) individuals and 3 (5%) individuals.

There was a substantial decline in symptoms of depression during the CWS course in both groups; from M_1 to M_2 in IG1, and from M_3 to M_4 in IG2. After the participation in the course, there was a more marked reduction in the depression level, but slower decline over time. There was a slight increase in BDI score toward the end of the assessment period.

Fit statistics for the linear mixed model were estimated for three models. Overall, model 3 was found to have the best fit as determined by the lowest AIC. Furthermore, the difference in -2LL between the models 2 and 3 indicates that the latter fits significantly better

($\chi^2(1) = 17.51, p < .001$). Across groups, participants on average experienced a reduction of 3.46 points on the BDI scale during the 8 weeks the course lasted ($p < .001$). We defined the pre-completion period to last until the final day of the course, and the effect of pre-completion time was no longer significant when the effect of intervention was added. Both the linear and quadratic effects of post-completion time were significant.

The pooled effect sizes show that both intervention groups had medium intervention effects during the eight weeks of participation, .51 in IG1 ($M_1 - M_2$) and 0.40 in IG2 ($M_3 - M_4$). In IG2 the effect was at the low end (.15) while the participants were waiting for the course to start ($M_1 - M_3$). The effect size revealed medium effect (.35) between IG1 at M_2 and the delayed intervention (IG2) at M_3 . The effect size showed medium and large effects at all follow-ups in both intervention groups after participating in the CWS course.

4.2 Results from Paper 2 on vitality, self-efficacy and self-esteem

T-tests of the three outcome variables at M_1 indicated no significant differences between the two intervention groups at baseline (M_1) (vitality $p = .93$, self-esteem $p = .51$ self-efficacy $p = .10$). Furthermore, scores on the outcome variables did not change significantly while participants in IG2 waited for the CWS course to begin. The p -values from paired t-tests between M_1 and M_3 for IG2 were $p = .096$, $p = .329$ and $p = .329$, for vitality, self-esteem and self-efficacy respectively. The main change for each group shows a considerable increase over the eight weeks the course lasts, indicating a significant effect of CWS.

At baseline (M_1) Cronbach's α values for vitality, self-esteem and self-efficacy were .92, .89 and .87, respectively.

The random intercepts in model 1 (the baseline model) indicate that there were significant differences in self-efficacy, self-esteem and vitality between participants. The difference in -2LL between models 2 and 3 suggests that the CWS course had a significant impact on the three outcome variables beyond the mere passage of time; self-efficacy (= 10.63, $p < .01$); self-esteem (= 16.33, $p < .001$); vitality (= 13.09, $p < .001$). Model 3 was also found, for all three dependent variables, to be the overall best-fitting model as judged by the lowest AIC. Regression effects during the waiting time in IG2 and the eight weeks of course time (pre-completion time) were controlled for in model 3. The CWS course could account for an average increase of 3.12 points in vitality scores ($p < .01$) across the two intervention groups. Self-efficacy and self-esteem increased by 1.08 points ($p < .05$) and 1.89 points ($p < .001$), respectively.

After the CWS course was completed, both the linear and quadratic effects of time (post-completion time) were significant for all outcome variables. Over the extensive follow-up period, the quadratic term eventually counteracted the positive linear effect. Towards the end of the assessment period, this is expressed as a slight decrease in self-efficacy, self-esteem and vitality.

When the IG1 participated in the CWS course ($M_1 - M_2$), the pooled effect size showed a small effect (.18) in self-efficacy, and a small-to-medium effect in self-esteem and vitality, .34 and .44, respectively. While participating in the CWS course, effect sizes in IG2 ($M_3 - M_4$) showed a small-to-medium effect in self-efficacy, vitality and self-esteem, .30, .44 and .25, respectively. The lowest effect size was shown at the time when the participants were waiting for the course to start ($M_1 - M_3$). During this period the results indicated no or little change in all the outcome measures in the control group (IG2). There were small-to-medium changes in all the outcome measures between M_2 and M_3 . Optimally, a measurement in IG1 at the same time as IG2 (at M_3) would give more precise calculations of the effects between the two groups. The follow-ups showed medium and large effects.

4.3 Results from Paper 3

A cross-lagged model was fitted, in which the longitudinal pathways between symptoms of depression, social support and self-efficacy were explored. Paper 3 is based on outcome variables from paper 1 (symptoms of depression) and paper 2 (self-efficacy), which have shown significant effects of the Coping With Strain (CWS) course. Paper 3 investigates a possible causal relationship between the variables that are hypothesized in the CWS course to influence depression. The theoretical assumption is that the CWS causes an increase in self-efficacy and social support, which in turn influences symptoms of depression.

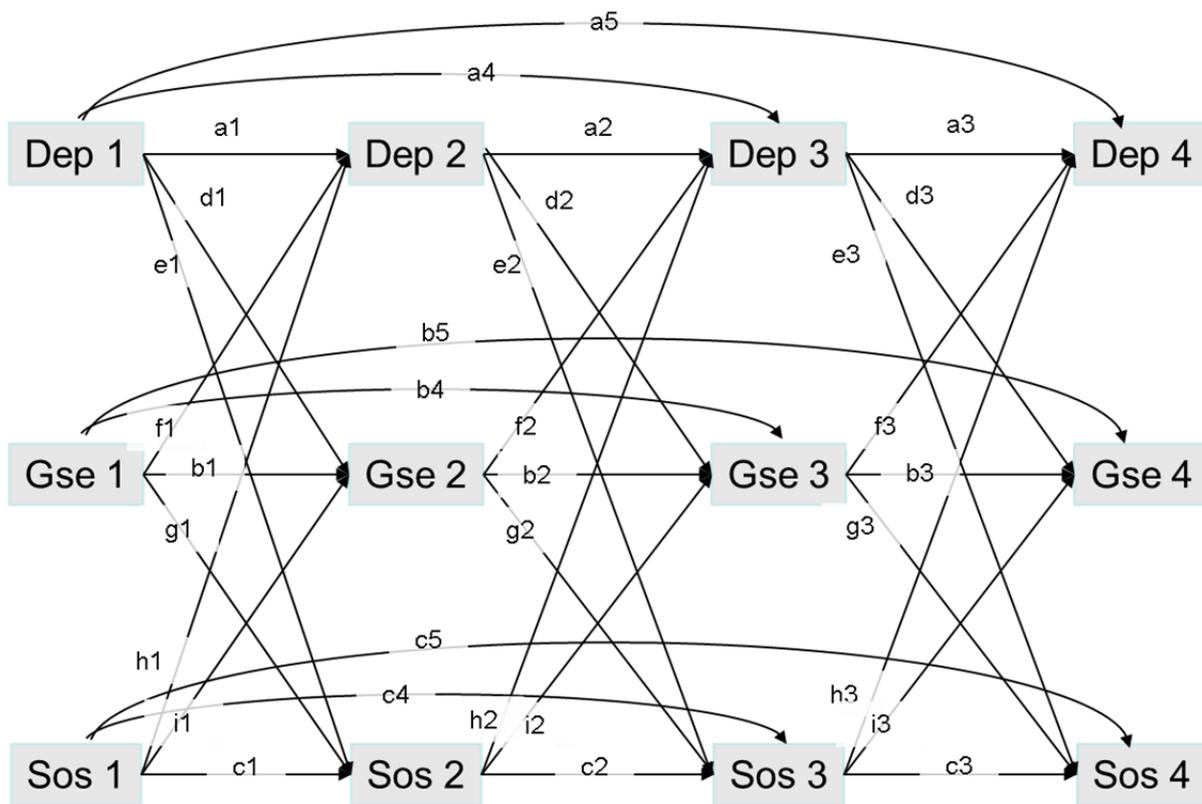


Figure 2: Description of the cross-lagged model

The text is rather complex and it seems necessary to show the model and the figure legend, which is: Model 1 - Full model; Model 2 - Drop: a4-5, b4-5, c4-5; Model 3 - Drop: d1-3, e1-3, f1-3, g1-3, h1-3, i1-3; Model 4a - Drop f1-3; Model 4b - Drop d1-3; Model 4c - Drop h1-3, Model 4d - Drop e1-3 ; Model 5a - (Drop d1-3), Drop f1-3; Model 5b - (Drop d1-3), Drop e1-3; Model 5c - (Drop d1-3), Drop h1-3; Model 6a - (Drop d1-3), Drop b4-5; Model 6b - (Drop d1-3), Drop c4-5; Model 7; Model 8a - (Drop d1-3), Drop g1-3; Model 8b (Drop d1-3), Drop i1-3.

First we made a baseline model, a regular cross lagged model with additional paths within each variable from t_1 not only to t_2 , but also to t_3 and t_4 . This model demonstrated good fit (RMSEA=.051, CFI=.988, SRMR=.069).

Then, we tested the fit of a regular cross-lagged model in which the paths from t_1 to t_3 and t_4 were dropped. The six paths were dropped, which resulted in a significant deterioration in fit ($\chi^2 = 58.43, \Delta df = 6; p < .001$). However, dropping all autoregressive effects also resulted in poor fit. Then, we dropped sets of cross-loadings between depressive symptoms,

self-efficacy and social support. Of these sets of sub-models, the strongest deterioration in fit resulted from dropping an effect from social support to subsequent depression ($\chi^2 = 22.45$, $\Delta df = 3$; $p < .001$). Conversely, dropping the paths from self-efficacy to subsequent levels of depressive symptoms did not result in a statistically significant reduction in model fit ($\chi^2 = 6.31$, $\Delta df = 3$; $p = .097$), but this sub-model was inferior with respect to parsimony-corrected fit measures (RMSEA = .061, CFI = .98).

The cross paths from depression to efficacy and social support demonstrated a similar pattern. Cross loadings from depression to subsequent efficacy could be discarded with very little reduction in fit ($\chi^2 = 1.68$, $\Delta df = 3$; $p = .64$), while dropping the loadings from depression to subsequent social support resulted in a significantly poorer fit ($\chi^2 = 12.074$, $\Delta df = 3$; $p < .01$). Subsequent sub-models were therefore tested. This confirmed that the remaining three sets of cross-paths could not be dropped. Constraining the residual correlations to be equal across time also reduced fit significantly ($\chi^2 = 10.542$, $\Delta df = 6$; $p = .10$).

The association between self-efficacy and social support was also investigated. Dropping the paths from social support to subsequent self-efficacy resulted in considerably poorer fit ($\chi^2 = 11.806$, $\Delta df = 3$; $p < .001$), while discarding the influence of efficacy on subsequent social support hardly reduced fit at all ($\chi^2 = 1.41$, $\Delta df = 3$; $p = .70$). The last model demonstrated good overall fit as judged by the lowest RMSEA of all the models (.029) as well as a good CFI=.995, and an adequate SRMR (.087). This model was therefore selected as the overall best fitting.

Furthermore, the results indicated that the patterns of correlations were in the expected direction. Generally, the correlations across time were consistent with autoregressive effects, in that the magnitude of the correlations tended to diminish with increasing time spans. Overall, the best fitting model contained significant negative paths from both social support and general self-efficacy on subsequent levels of depressive symptoms. Therefore, paper 3 supports the assumption of causal relationships between social support, self-efficacy and symptoms of depression underlying the CWS course. Specifically, levels of depressive symptoms were found to be significantly associated with earlier levels of efficacy and social support. Social support, but not efficacy, was influenced by previous levels of depressive symptoms. The strongest association was between social support and later levels of depression.

5 Discussion

5.1 Interpretation of the main results

The first two papers in this thesis showed how levels of depressive symptoms (paper 1) and levels of self-efficacy, self-esteem and vitality (paper 2) change when participating in the CWS course, and during the four years following the course. There is a significant reduction in symptoms of depression, and significant increases in self-efficacy, self-esteem and vitality that can be attributed to the course, and a continuing change in the follow-up period.

The CWS course aims at increasing the participants' self-efficacy and social support, and it is assumed that these in turn will reduce depressive symptoms. In paper 3, this theoretical assumption is tested, but only based on post-CWS course measurements. The main finding in paper 3 is that levels of social support and self-efficacy are negatively associated with subsequent levels of depression.

5.1.1 The effect on symptoms of depression (Paper 1)

The findings in paper 1 indicated that the CWS course is effective in reducing symptoms of depression among employees. The effects are long-lasting and may be maintained over a period of four years, although somewhat reduced towards the end of the period. Most of the reduction in symptoms of depression that took place during the course is attributed to the course, since the reduction in the symptoms in the delayed intervention (IG2) which took place before participating in CWS was rather small. This indicates that symptoms of depression may not have been reduced much without participating in the course.

The findings are in line with the findings from the review of Tan et al. (2014), which shows that CBT-based interventions significantly reduce levels of depressive symptoms among employees. The meta-analysis of Martin, Sanderson and Cocker (2009) also found that workplace interventions reduce symptoms of depression. Such findings demonstrate that evidence-based interventions in the workplace should be part of efforts to reduce levels of depression in populations (Tan et al., 2014).

Since the participants initially have low levels of symptoms of depression, universal interventions may not have large effects, but the overall impact of such interventions may still be substantial if delivered to large numbers of employees (Tan et al., 2014). In the review of Tan et al. (2014), the effect sizes were shown to be small. Prior to the review of Tan et al. (2014), the meta-analysis of Martin, Sanderson and Cocker (2009) also showed that workplace interventions contribute to reducing symptoms of depression. However, the effect

sizes in that review are also small. However, the findings in paper 1 in this thesis show small to medium effect sizes of the CWS intervention. The effect sizes after the participation and over the follow-up period of four years indicate a stronger effect of the CWS course than most similar mental health interventions.

However, there is a need for more RCT studies evaluating interventions which aim at reducing symptoms of depression. The review by Tan et al. (2014) contains only nine RCTs, and mainly evaluations of Cognitive Behaviour Therapy. The meta-analysis of Martin et al. (2009) included 22 studies published in the period 1998-2007, but considering the broad inclusion criteria in this meta-analysis, including studies that varied a lot in research design (not all being RCTs), this number is also not very high. Tan and associates maintain that the validity of conclusions of meta-analysis may be limited by the inclusion of studies other than RCTs (Tan et al., 2014).

RCTs are commonly referred to as the “gold standard” in research on interventions. RCTs are quantitative, comparative, controlled experiments in which treatment effect sizes may be determined with less bias than is the case with observational trials (Stolberg, Norman, & Trop, 2004). However, a wider range of study designs may better adapt to the circumstances in real-world settings such as workplaces (Harvey et al., 2014). Not only evaluations of CBT-interventions should be conducted, but also evaluations of other intervention programmes. This will enable comparisons of effects across a wider range of interventions.

The findings in paper 1 may be relevant to a range of practitioners in the field of mental health, to employers, employees, to communities and to society in several ways. In the bigger picture, efficient and effective mental health interventions may be of great importance. With 60% of the world’s population engaged in some form of employment and 60% of their waking hours spent at the workplace (WHO, 2008), there is potential to reach a substantial number of people in order to prevent ill-health and strengthen positive mental health. The workplace has been identified as one of the most important social contexts in which to address mental health problems and promote mental health and well-being (WHO, 2010; National Institute for Health and Clinical Excellence, 2009; Leka & Cox, 2008; Cox, Leka, Ivanov, & Kortum, 2004).

The findings in paper 1 may throw light on an important strategy for fighting depression. Over the past decades, depression has emerged as one of the most prominent mental disorders and pressing mental health problems (WHO, 2012). Depression is currently the leading cause of disease-related disability worldwide and is associated with life-

threatening diseases and suicide (WHO, 2012). There is growing recognition across the European Union, and moreover globally, of the economic and social impact of mental ill-health, and the importance of promoting mental well-being and preventing the onset of mental disorders in society-at-large (WHO, 2005). Utilizing evidence-based interventions, such as the CWS course, may be one of several tools for defeating depression.

To offer the course to employees who may show early signs of depression in order to defeat or delay the onset of depression, is of great importance. There is increasing evidence that early detection of mental problems and treatment at an early stage are associated with reduced incidence of mental illness (McGorry, 2008). Interventions that aim to improve individual capacity and reduce ill-health may contribute to productivity and economic development (Merllie & Paoli, 2001; Office for National Statistics (UK), 2001).

Adding to the findings from paper 1, one could argue that symptoms of depression should receive more attention. Depression is more than a mental illness. Subsyndromal and mild to moderate symptoms of depression contribute more than any other health condition to costs such as work disability pensions, active sick leave costs and absence from work (Foss et al., 2010; Knudsen et al., 2010; Henderson et al., 2005). Mental health problems can affect work performance in terms of increases in error rates, poor decision-making, loss of motivation and commitment, and tension and conflicts between colleagues (Harnois & Gabriel, 2000). However, when managers and leaders are asked about their knowledge and awareness of mental problems among employees, they estimate that the prevalence of mental problems in employees is 1 in 20, whereas studies estimate the prevalence to be 1 in 5 (STAKES, 1999).

However, on a general basis, initiatives to reduce symptoms of depression are not common practice and programmes that are offered to employees historically have a tendency of being used without evaluating their effects. This is due to a variety of factors, two of which are a neglect of mental health problems in the workplace (Tan et al., 2014) and delays of implementing potentially helpful strategies and practical difficulties in conducting research in the workplace (Harvey et al., 2014). Evaluations may, however, provide valuable insight which may inform public mental health practices and policies. As emphasized by Oxman et al. (2014), to test and document to what extent an initiative has positive effects is an important obligation, before advertising the benefits and expected favourable outcomes for employees and employers.

5.1.2 The effect on vitality, self-efficacy and self-esteem (Paper 2)

In paper 2, we tested the effect of the course on vitality, self-efficacy and self-esteem. A positive significant effect was found for the CWS course for all three outcome measures across both intervention groups. There was no significant increase in self-efficacy, self-esteem, and vitality during the six months that Intervention Group 2 (IG2) had to wait to attend the CWS. This may imply that the strengthening of the participants' positive mental health scores may be attributed to their CWS participation. The effects were maintained for a period of four years, although weakening somewhat towards the end of the period.

Paper 2 may provide evidence on how to increase positive mental health among employees, e.g. empower self-efficacy, self-esteem and vitality. The results are relevant in relation to the theories of these three mental health constructs. The participants in CWS may acquire, through increased self-efficacy, an ability to perform a given behaviour e.g. coping and self-regulation (Bandura, 1982; Lent & Hackett, 1987). Generalized self-efficacy is a broad mental health concept, but in this thesis it is thought to be a motivational state and tied to other self-evaluation constructs such as self-esteem (Judge, Thoresen, Pucik, & Welbourne, 1999). Self-esteem, combined with self-efficacy, may reflect the participants' overall subjective emotional evaluation of their own worth and attitude towards themselves (Smith & Mackie, 2007). The CWS course seems to increase vitality and may have contributed to reducing feelings of being tired and worn out, and to an increased feeling of pep and energy. Vitality is incorporated in the state of well-being (Ware & Sherbourne, 1992), and according to WHO definitions, well-being and self-efficacy constitute aspects of mental health (WHO, 2004a).

The findings in paper 2 are in line with other studies on workplace programmes that focus on enhancing employees' self-esteem and social support (Lahtinen et al., 2005). Some of these studies, however, also test to what extent intervention programs contribute to improving the organizations' productivity. These studies found that the productivity level can be improved (Lahtinen et al., 2005).

There are few RCT-based evaluations of interventions where the main aim has been to promote positive mental health among employees. Studies of interventions which have also aimed at influencing risk factors such as obesity and diabetes are more common. There is a diversity of studies on positive mental health interventions carried out in the context of disease prevention programmes. Examples are studies examining the effects of interventions among employees with chronic health conditions, interventions to promote physical activity,

healthy diets and interventions on other life-style factors. Schopp, Bike, Clark and Minor (2015) found that self-efficacy was improved among employees who participated in the Chronic Disease Self-Management Program, compared to a control group.

The findings in paper 2 illustrate the value of positive mental health initiatives for employees. According to the 5th European Working Condition Survey, one in five European workers reported poor mental well-being (Eurofound, 2012). Paper 2 shows the importance of evidence-based programmes which aim at providing employees with tools to deal with strains at work and in daily life. The findings may be important for practitioners in the field of mental health, since they identify practical means by which workplaces can enhance the mental health and well-being of employees. Findings from the research literature suggest that developing a mentally healthy workplace is worth pursuing for its multiple benefits to individuals as well as organisations, e.g. well-being is negatively associated with presenteeism (Cancelliere, Cassidy, Ammendolia, & Cote (2011) and is positively related to work performance (Wright & Cropanzano, 2000; Harvey et al., 2011).

However, according to WHO (2004b), a diversity of mental health promotion programmes are in fact implemented in workplaces worldwide, but the effects are often not evaluated nor tested with studies utilizing an RCT-design. A continuum of approaches is needed in advancing the knowledge on best practice in real settings, ranging from RCTs to correlational studies and more qualitative process-oriented methods such as the use of case studies, narrative analyses, interview-based studies, surveys, and ethnographic studies (McQueen & Anderson, 2001). Collections of all kinds of data, and prioritizing review-articles and overviews of such evaluations, may contribute to advancing the knowledge of the evidence on mental health improvements among employees (WHO, 2004b).

5.1.3 Associations among factors (Paper 3)

Independently of the intervention outcome-papers (papers 1 and 2), the third paper in this thesis prospectively examines reciprocal associations between symptoms of depression, social support and generalized self-efficacy (GSE). We test some of the theoretical assumptions and underpinnings of the CWS course, which is that high levels of social support and GSE tend to prospectively reduce symptoms of depression. The analyses presented in the third paper in this thesis are based on post-intervention data collections only, and provide no information about intervention effects or mediation of intervention effects.

The findings in paper 3 indicate that it is not levels of depression that tend to influence GSE prospectively. It is rather the level of GSE and social support that influence symptoms of depression. The strongest cross-lagged association identified in paper 3 is between social support and later symptoms of depression, and between social support and self-efficacy. Considering that the last section in the CWS textbook focuses on how to increase social activities, and how the participants can increase social relationships with others, the findings correspond well with the rationale for and purposes of the course. Social support is assumed to be important by increasing the senses of belonging and ability to cope in a complex environment and by “buffering” the negative effects of stress on well-being and mental health (House, 1981; Cohen & Wills, 1985; Cohen, 1988;). Social support is one of the most well-documented psychosocial factors influencing physical health outcomes and this is documented in several reviews and studies (House, Landis, & Umberson, 1988; Berkman, Glass, Brissette, & Seeman, 2000; Holt-Lunstad, Smith, & Layton, 2010; Pinqart & Duberstein, 2010; Uchino, 2004). Numerous studies have also shown that poor social support predicts depression (Brugha, Bebbington, MacCarthy et al. 1987; Binder & Strupp, 1997; Manne, 1999; Manne et al. 1999).

Besides to strengthen social relations, the aim of the CWS is to increase coping skills. Coping strategies regarding three main areas are; how specific situations influence people’s feelings, how the interpretations of the situation influence on their cognitive and behavioral reaction, and how to gain more alternative perspectives of the situation. This study utilizes a measure of generalized self-efficacy to examine coping skills, because researchers have argued that self-efficacy is one of several skills needed for emotional competence which are involved in coping (Saarni, 1999). Self-efficacy is interpreted as the positive capacity of an individual to manage stress and serves as a self-regulatory function by providing individuals with the capability to adapt their own thoughts and actions according to their environment (Lazarus & Folkman, 1984). It is assumed that the greater the degree of internal resources and self-efficacy beliefs available, the more comprehensive the coping mechanisms will be (Saarni, 1999). According to Bandura (1998), self-efficacy expectations influence the choices that individuals make, their level of effort and perseverance, their hopes, their resilience to adversity, and their vulnerability to stress and depression.

Many studies explore the mediating role of self-efficacy or social support on depression, the studies are often cross-sectional, and mostly they test these associations on factors such as a chronic illness. There exists a diversity of such studies, for example Marino, Sirey, Raue et al. (2008) showed that subjective social support and self-efficacy predict

objective health outcomes (functioning) in depressed older adults with chronic obstructive pulmonary disease (COPD). Findings from Fiori, McIlvane, Brown et al. (2006) suggest that self-efficacy may function as a mechanism through which social relations influence depressive symptoms, and that the importance of this mechanism as domain-specific or domain-general may vary with age. In a study of Haslam, Pakenham & Amanda (2006), the findings indicated that higher parental support and maternal self-efficacy are associated with lower levels of depressive symptomatology postpartum.

These findings, and also findings from the study presented in Paper 3, contribute with evidence in support of the assumption that self-efficacy and social support are important causal factors for depression. The findings in Paper 3 are probably not much affected by the fact that the sample took the CWS course, and they are not informative on the effect of the course. Still we cannot confidently conclude that the findings from this sample are fully valid for the general population, not even for the female population. Also, since the ways social support and self-efficacy are measured vary across studies, it is difficult to make fully valid comparisons.

Paper 3 adds knowledge for practitioners in mental health, researchers and others who are interested in causal relationships between depression and related factors like coping and social support. Such knowledge is important for making decisions on investing in health interventions aiming to reduce and fight depression.

Our sample is rather small. A larger sample would have given more precise estimates and more reliable statistics for choice of model. A larger sample might also have permitted testing of more complex models and identification of possible moderators. It would, for instance, be interesting to examine possible sex specific effects. Interrelationships among a larger selection of factors, including measures of positive mental health, might prove important. Health enhancing factors such as social support and generalized self-efficacy may be related also to positive aspects of mental health such as vitality and self-esteem.

Overall, the results of the three papers in this thesis indicate that the CWS course works in accordance with its theoretical underpinnings. We have not tested, however, whether it is the same individuals who profit from participation in the CWS course by reducing symptoms of depression (paper 1) that also achieve increases in self-efficacy, self-esteem and vitality (paper 2). For the testing of such relationships we would probably also need a larger sample than ours.

5.2 Methodological considerations and generalizability of the results

5.2.1 Methodological strengths and limitations

This study has several strengths. To the best of our knowledge, this is the first study of a version of the CWD intervention which examines effects on both symptoms of depression and on aspects of positive mental health (paper 1 and paper 2, respectively). Before the intervention took place in the delayed intervention group (IG2), the IG2 functioned as a control group and allowed us to estimate the extent of recovery that spontaneously occurs over time independently of participation in a CWS course. The project has, additionally, a long follow-up period compared to other studies which conduct evaluations of similar programmes (Cuijpers et al., 2009). It is important to follow the participants over a long period of time, because it provides documentation of possible long-term effects (paper 1 and paper 2).

In the last paper we examined cross-lagged associations between three factors whose interrelationships are important to describe in order to understand effects of CWD interventions (paper 3). Although the analysis presented in paper 3 is based on data from post-intervention measurement occasions only, and intervention effects are therefore not modelled, results from this paper may contribute to our understanding of causal processes taking place in the context of CWD interventions. The long follow-up period of four years allows us to estimate the longitudinal relationships among the variables over a long period of time (paper 3).

The sample size in this project was modest, which might weaken its statistical power and the precision of the estimates. However, in our case we were able to reject all the most important null hypotheses. Large samples mean high statistical power and more accurate estimates of intervention effects, and if the intervention has effects, it is easier to obtain significance. Nonetheless, despite the limited number of participants, the findings in the two first papers show significant intervention effects, and medium to large effect sizes, and the model tested in paper 3 shows significant cross-lagged associations.

One concern is whether the reduction in symptoms of depression (paper 1), and increase in self-efficacy, self-esteem and vitality (paper 2) during the interventions could be due to the selective attrition of participants, which if true could impact the validity of the results. However, by the first course day of the delayed intervention (M_3 in paper 1 and paper 2) only a quarter of the participants in the intervention group had dropped out. The mean changes from M_1 to M_3 on symptoms of depression, self-efficacy, self-esteem and vitality are

barely one or two points, which indicate that the effect of the selective drop-out was not strong. There were technical issues at the first follow-up that led to a decrease in the number of respondents with valid data. There were a relatively large number of participants at the last two follow-ups. Each of these two data collections comprised about half of the participants who initially started in the project. Intervention effects remained significant, and this strengthens our confidence that the intervention effects shown were not much influenced by selection processes.

Unfortunately, there is a 10-week difference in time between the last day on CWS in the intervention group (IG1) and the first day on CWS in the delayed intervention (IG2). We did not carry out measurements in IG2 (see Figure 1) at the exact time when the first intervention group completed their course (M_2). Conversely, we did not obtain measurements in IG1 at the exact time when the delayed intervention started their course (M_3). This resulted in difficulties in testing the effect size between the two CWS groups; comparing the control group with the first intervention group. However, the effect size between the two CWS groups may be underestimated in paper 1 and paper 2, because the effect sizes might have been even larger if it had been possible to compare both groups on the first day at the CWS course in the delayed intervention group. There are positive changes in the outcome variables, which indicate that the first CWS group (IG1) may have changed more at this time point than on the last day of CWS in IG1.

It was originally planned to analyse intervention effects with repeated measures using ANOVA, but because of the high level of attrition at some data collection occasions, this analysis was poorly suited. The number of cases with valid data over all measurement occasions was low, necessitating a statistical analysis which would effectively utilize all valid data and at the same time handle missing data in the best possible way. We therefore used linear mixed models analysis (LMM) in papers 1 and 2. The flexibility of LMM allowed us to utilize all valid observations at all measurement occasions and to handle non-balanced data with missing entries and repeated observations. The method also permitted changes during the interventions to be constrained to be equal across the two groups, and in this way the power to detect an effect of the CWS course was increased (in papers 2 and 3). In paper 3, the two CWS groups were merged in the cross-lagged analysis.

The expectations of positive effects of attending the CWS course might invoke a placebo response in the delayed intervention group. The participants might modify or improve aspects of their behaviour in response to their awareness of the incipient CWS course. However, mean changes in symptoms of depression and scores on self-efficacy, self-esteem

and vitality were weak, as illustrated by the small mean change observed in IG1 participants waiting for the course to commence.

Since we included two CWS groups in the study, we were able to estimate the joint effect of these two separate groups, and we were able to follow both groups over a long period of time. One concern is that the lack of a control group with which one could compare the two intervention groups during follow-up data collection occasions, makes us unable to rule out the possibility that other factors may have contributed to the observed long-term maintenance in levels of symptoms of depression, self-efficacy, self-esteem and vitality. One example is to rule out placebo effects that may have affected the delayed intervention group. Certainly, it would have been favourable to have a control group following the four-year follow-ups, but it is difficult to assess many measurements over time in a group without offering some sort of intervention or compensation. Following a control group over such a long period of time might also have increased attrition rates, which would have reduced comparability. Furthermore, it is obviously not ethical to not offer a control group any sort of intervention for such a long period of time. Employees who contacted the course leaders in order to follow the CWS course may have been in need of tools to cope with stressors.

A traditional RCT study would most likely have been limited to a six-month follow-up period (the start of the delayed intervention). Evaluation studies of similar programmes only have a follow-up period spanning from six months to two years (Cuijpers et al., 2009). Both paper 1 and paper 2 show the same significant pattern over time, in both intervention groups. We observed similar developments in both intervention groups on all the three outcome measures. This adds to our confidence that the CWS course produced positive long-term effects.

We have not collected data on participants' stressors or factors that may have contributed to high levels of perceived strain. We have not asked them to report their strains with regard to stressors such as chronic illnesses or psychiatric problems among children or other close relatives. However, we regard it as less likely that the participants in both CWS groups experienced a sudden drop in their strain levels when attending the course. It seems more plausible to assume that it was the CWS course that empowered the participants to better cope with their strains.

Additionally, in paper 3, some parameter estimates, in particular the later autoregressive paths on depression, deviate from what we expected, which is most probably due to random fluctuations.

The CWS course is based on a theoretical assumption that cognitive behaviour therapy increases self-efficacy and social support, which contributes to reductions in symptoms of depression. The evidence of a possible significant increase in social support may be covered in later publications from this project.

5.2.2 Internal and external validity

Internal validity refers to issues already discussed above regarding the strengths and limitations of the design. Internal validity refers to causal effects; whether the observed covariation between two variables A (the presumed treatment) and B (the presumed outcome) reflected a causal relationship from A to B as those variables were manipulated or measured (Shadish, Cook, & Campbell, 2002). The changes in mean levels of self-efficacy, self-esteem and vitality and of symptoms of depression observed during the interventions described in this thesis, over and above the changes that are estimated to have taken place anyway, are attributed to the participation in the CWS course. The CWS course as a mental health intervention is mainly based on cognitive behaviour theory and therapy, which in turn is based on a set of assumptions concerning factors and processes causally related to outcomes. Internal validity may be threatened if results in relation to the presumed outcomes, such as indicators of self-efficacy and social support and symptoms of depression, do not match the underlying theory. The CWS course is based on theory which explains why outcomes such as those measured in our study should be influenced by this intervention.

External validity refers to the extent to which the results can be generalized. One important goal of all research is to obtain results that can be generalized to a broader population from the examined sample (Shadish et al., 2002). The concept of generalizability deals with inferences about whether a relationship between variables holds true over variation in people, settings, treatments, and measurement variables (Shadish et al., 2002). Critical aspects are the response rate and the characteristics of the non-respondents (Kerlinger, 1986).

One basic premise for generalization, from our sample recruited from four municipalities in Eastern Norway to the rest of the Norwegian population, is that there are no important differences between the sample and the working population in Norway. However, the sample in the project contains employees in public services, and we have only evaluated the CWS course with participants from this specific group. The results in the three papers may probably be generalized to the population of employees in similar workplaces elsewhere in

the country. Although occupations vary in many ways, it is difficult to imagine any reason to expect major differences in mental health benefits of CWS courses across occupations or municipalities. Participant characteristics such as gender, age, and severity of symptoms of depression are primary factors in generalizability from the study like the present one. Depending on the characteristics of the populations of interest, generalizability of the same study can range from low to high (Gartlehner, Hansen, Nissman, Lohr, & Carey, 2006). Overall, the CWS course may have similar mental health effects on participants in other municipalities who are self-recruited, motivated to participate, and have minimal to moderate symptoms of depression.

However, it is not easy to assume that our findings are relevant to populations or sub-populations in other countries. One important reason is that paid sick leave is organized in Norway differently from other countries. Additionally, almost all of the participants in our CWS intervention were women, a fact that limits generalizability.

The Coping With Depression course (CWD) have shown positive results in a variety of target groups (Cuijpers et al., 2009), and one may ask why it is necessary to test another version of the course. Within-group differences may be larger than between-group differences (Pantalone, Iwamasa, & Martel, 2010). However, other CWD-versions are mainly indicated prevention interventions. Participants with symptoms of depression in the general working population (addressed with CWS) may have different needs and characteristics than participants with major depression in the mental health care population (addressed with CWD). A separate evaluation is therefore appropriate.

However, another important perspective is that the CWS course may be effective for individuals without targeting specifically employees and workplaces. Home/private problems and problems at work may spill over, and the textbook does not constrain the problems to be solely work-related.

Finally, it is not easy to compare across CBT studies. CBT therapy is an umbrella concept covering several therapies and classes of therapies. When CBT therapies are evaluated, the interventions or therapies need to be thoroughly described, in order to shed light on the generalizability of any findings. However, journals may prefer short descriptions of interventions or therapies, and it seems that the statement “CBT-based” is mostly used without much specification.

5.2.3 Efficacy studies versus effectiveness studies

The distinction between efficacy studies and effectiveness studies is relevant for the discussion about generalization of the results. A randomized controlled trial (RCT) is by many regarded to be the so-called gold standard for evaluating the effects of interventions. RCTs are advantageous in that they are controlled and permit comparisons across studies. In the research literature, RCTs are said to address the “efficacy” of an intervention, as opposed to its “effectiveness”, which is addressed when interventions take place in ordinary clinical or public health intervention practices and settings (Kazdin, 2003). Efficacy trials (explanatory trials) determine whether an intervention produces the expected result under ideal circumstances. Effectiveness trials (pragmatic trials) measure the degree of beneficial effect in “real world” settings (Godwin et al., 2003). On the one hand, the evaluation of the CWS course constitutes an efficacy study, since the design is experimental and involves randomization to the two intervention groups, the purpose being a high level of internal validity. On the other hand, the study is carried out under real world conditions and circumstances, hopefully allowing for a high degree of generalizability. The project emphasized the importance of carrying out the intervention under as normal conditions as possible, and in accordance with the course leaders’ ordinary practice.

5.2.4 Validity of scales

The Beck Depression Inventory (BDI) is one of the best established depression scales ever and is used both in research and in clinical work. The scale has capacity to identify individuals with and without depression disorder. Three studies show specificity estimates ranging from 82% to 99% and sensitivity estimates ranging from 82% to 97%, for present major depression or for major depression during the next two years (Beck, Guth, Steew et al. 1997); Steer, Cavalieri, Leonard et al. 1999; Viinamäki, Tanskanen, Honkalampi, 2015). The vitality measure used in this study appears to have a good face validity, although the theoretical basic of this trait may probably be disputed. Rosenberg’s RSES (Rosenberg, 1965) is the most frequently used instrument of this type and is probably the closest we get to a psychometric gold standard of self-esteem. There are several different measures of coping-like traits or behavior, of which the Norwegian Version of the General Perceived Self-Efficacy Scale (GSE), which measures general self-efficacy, is only one. Whether self-efficacy as measured by the GSE is an optimal choice, is probably also open to discussion.

The effect on self-efficacy in Paper 2 and the association between self-efficacy and symptoms of depression in Paper 3 are not as strong as expected, and one may reflect on whether the questions in the test do not adequately measure aspects of self-efficacy relevant to this specific population. One interpretation is that there may be other relevant and specific components in the concept of self-efficacy that are not covered by a GSE scale. The scale aims at tapping a broad and stable sense of personal competence to deal efficiently with a variety of stressful situations (Schwarzer & Jerusalem, 1995; Sherer et al., 1982). Accordingly this general measure may not measure specific behavior change well (Schwarzer & Jerusalem, 1995).

Although the choice of at least one of the psychometric instruments is not an obvious one, in general previous evidence demonstrates satisfactory to excellent validity for our outcome measures. Item analysis for all these measures in this thesis showed high reliability, with Cronbach's α estimates ranging from 0.83 to 0.93 across all measurement occasions. The high reliability is a necessary, although not sufficient condition of high validity.

5.3 Future directions

Interventions such as CWS may first of all influence mental health through changes in individual determinants or personal level factors such as generalized self-efficacy and ability and motivation to socialize. There is a need to understand more of the role of personal-level factors in the workplace, and to what extent it is possible to modify such factors.

There is often a wide gap between what is published on public health interventions in academic journals and what occurs in workplaces. There is an urgent need to motivate researchers to use other communication channels than scientific journals which are read by few beyond the international communities of researchers.

There is also an urgent need to develop mechanisms to ensure that only high-quality interventions are made available to employers and public health practitioners. Evidence-based practices would be beneficial for individuals, employers, communities, and society. It would be beneficial to utilize available evidence with regard to what characterizes a healthy workplace. There should be more evidence on organizational outcomes like absenteeism and presenteeism and the extent to which the effects vary with types of occupation and size and type of organizations, and there is a need for research on the costs and benefits of interventions.

Prevention is often defined as reducing the incidence of mental disorders (or other illness). In the present study, we have instead focused on the levels of symptoms of

depression and scores on scales measuring positive aspects of mental health (vitality, self-esteem and generalized self-efficacy). We would argue that the latter approach is just as important as the first. Not only do sub-clinical levels of depression and other common mental health problems represent a heavy burden on health and social services, but it is also likely that reductions in symptom levels and levels of distress contribute to reducing incidences of mental disorders.

The relationship between thoughts, feelings and behaviour have been extensively studied, but the core mechanism by which cognitive behaviour therapy works should be more thoroughly investigated. For example, do treatment and prevention of depression only treat the symptoms of depression? Are symptoms of depression only symptoms of other problems? For a number of years, cognitive behaviour therapy has been criticized for being “a quick fix”, “superficial” and only targeting the symptoms of illness. This issue has also recently been debated (Cristea et al., 2015), and it is really unknown whether therapies only affect the symptoms of illness (depression), e.g. reduces dysfunctional thinking, or whether they also tackle the complexity of the illness (Cristea et al., 2015). However, cognitive behaviour therapy has in recent years developed considerably and has incorporated mindfulness and existential philosophy, and factors from many other therapies. This change is called “The third wave of CBT” (Binder, Gjelsvik, Halland et al., 2005).

Furthermore, it would be interesting to know more about the complexity of the mechanisms that cause changes towards improved mental health. More studies on the causality of states and traits such as vitality, self-esteem, coping and various types of mental disorders might for instance help us understanding of whether it is symptoms of depression that cause diminished efforts to change destructive thinking, e.g. working with coping strategies, or whether it is diminished efforts to change destructive thinking that cause symptoms of depression.

One may envisage future directions where the focus and emphasis on workplace mental health are completely different from today's. One vision would be that there is no longer a need for mental health programmes, because the knowledge of healthy workplaces and the relevant skills and practices have diffused into the daily life of workplaces. Practices related to important and relevant aspects of organizations and the way workplaces function might be based on scientific evidence. There could be a focus on reducing risk factors and enhancing health promoting factors in the workplace. Some examples of challenges to tackle have already been described in the introduction to this thesis, e.g. conflicting demands at work and at home, and stressful life events. One may assume that the stigma of mental

problems would then be reduced and strategies to make workplaces mentally healthy would be common knowledge. However, perhaps such an ideal notion of workplaces neglects a rather important insight; namely that the world is far from perfect. Actually, striving for a perfect workplace would most likely teach employees awareness of all the aspects and areas which are not perfect. Organizations may well be increasingly demanding and unpredictable in the years to come, and employees will always experience some degree of stress and uncertainty and will surely be exposed to a variety of risks. The most important knowledge perhaps concerns how to empower oneself and others, and to navigate emotionally and behaviourally in a non-perfect world.

6 Implications and conclusions

Findings presented in papers 1 and 2 indicate that the Coping With Strain (CWS) course on average has led to significant positive effects on symptoms of depression, as well as on generalized self-efficacy, self-esteem and vitality. These effects may be seen for a long period of time, at least four years. The conclusions in papers 1 and 2 are based on an experimental design where one group receives the intervention immediately and the other group after a delay. This design permits differentiation between a natural change in the outcome variables and change caused by participation in the CWS course. Furthermore, we have a follow-up period stretching across four years. Use of linear mixed models (LMM) in the analyses of intervention effects compensates for some of the problems of this study, lack of measurement on all relevant occasions in both groups, and high, as well as varying, levels of attrition and missing observations. The sample size was modest, and non-participation at some of the measurement occasions was high, which might threaten the validity of the results.

The cross-lagged model presented in paper 3 showed that levels of self-efficacy and social support predict changes in levels of depression. Levels of depression do not predict changes in levels of self-efficacy. The findings are in accordance with the underpinnings of the CWS course. The text in the CWS textbook describes that strengthening of coping abilities and more pleasant activities will reduce symptoms of depression. However, levels of depression do predict changes in social support, which may imply that depression may be an important factor in mechanisms related to experiencing and perceiving social support.

The CWS course has been shown to have effects on ill-health and positive mental health, and can be beneficial to employees with minimal to moderate symptoms of

depression. The participants in this project were mostly women. The extent to which our findings can be generalised to groups with other gender ratios remains unclear and deserves attention in future studies. There may be reason for optimism with regard to generalizing findings to workplaces similar to the ones we covered in this PhD project. The course may be beneficial for employees who seek the knowledge and tools to improve their mental health and reduce ill-health. In a bigger picture, the results in the three papers may be useful for employees, employers, workplaces and society in general to address and fight depression and promote well-being and positive mental health.

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Appendix I; The invitation to participate in the CWS course

INVITASJON

KURS I BELASTNINGSMESTRING

- for ansatte i XXX -

MÅLGRUPPE

Kurset er utarbeidet for personer som ønsker å lære metoder og teknikker som kan benyttes for å mestre belastninger knyttet til arbeids- og privatliv. Med mestring menes en måte å håndtere belastningen på som oppleves som tilfredsstillende for den enkelte, og som ikke har negative konsekvenser for livskvalitet og helse. Kurset tar opp allmenne problemstillinger som kan være aktuelle for de fleste mennesker.

Eksempler på belastning knyttet til arbeidsliv: tidspress, for mye/for lite utfordringer, manglende muligheter til å styre sitt eget arbeid og lite støtte fra overordnede/kolleger.

Eksempler på belastning knyttet til privatliv: problemer i parforhold, familiekonflikter, tap av nære personer, sykdom/helseproblemer, psykiske problemer og frykt for ikke å strekke til/være flink nok.

Kurset er for både sykmeldte (fra 10 – 100 % sykmeldt) og ansatte i arbeid (uten noen form for sykmelding).

INNHALDET I KURSET

Deltakerne på kurset gis opplæring i bruk av kognitive teknikker som er rettet mot forebygging av belastninger og hvordan mestre belastninger. Det må påregnes noe arbeid i form av hjemmeoppgaver.

PRAKTISKE OPPLYSNINGER

- Kurset går over åtte uker med ett møte i uken, og har to oppfølgingsmøter.
- Hvert møte varer i to og en halv time.
- Kurset holdes som oftest av to kursledere.
- Kurslederne har en forsamling med de som ønsker å delta på kurset. Forsamlingene vil bli holdt XX.
- Det er ca 10 deltakere på hvert kurs
- Kursboka er gratis.

PÅMELDINGSFRIST INNEN XX

Henvendelser enten via e-mail eller telefon:

Vedr. kurs for de som er i jobb: navn Tlf xxx
E-post: xxx

Vedr. kurs for sykmeldte: navn Tlf xxx
E-post: xxx

DEL AV ET FORSKNINGSPROSJEKT

Alle som deltar på kurset vil få en forespørsel om å delta i et forskningsprosjekt.

Kursdeltakelsen og evalueringen henger sammen, slik at hvis du melder deg på kurset så melder du deg også på evalueringen.

Forskningsprosjektet er godkjent Regional komité for medisinsk forskningsetikk (REK) og Personvernombudet. Studien utføres av Nasjonalt folkehelseinstitutt (FHI), Divisjon for psykisk helse, Avdeling for helseovervåking og forebygging.

FHI anser kurset som et interessant og potensielt forebyggende tiltak i arbeidslivet, men at det er behov for en vitenskaplig evaluering av de eventuelle effektene av kurset.

FHI ønsker å undersøke om kurset bidrar til

- Økt livskvalitet, selvillit, sosial støtte og mestringsforventning
- Reduksjon i eventuelt sykefravær, depresjonssymptomer, medisinbruk, negative livsbelastninger og utbrenthet

Den praktiske utførelsen av studien

Undersøkelsen baseres på syv spørreskjemaer. Kurslederne deler ut skjemaene på forsamlingen og på siste kursdag. Når FHI får spørreskjemaene tilbake fra forsamlingen, deles deltakerne i to grupper. Den ene gruppen begynner på kurset umiddelbart og den andre gruppen begynner på kurset etter ca seks måneder. Den sistnevnte gruppen vil i tillegg fylle ut spørreskjema på første kursdag. Kursdeltakerne vil få oppfølgingsspørsmål via mail en gang i året i tre år etter fullført kurs.

Evalueringen

Ved å sammenligne skårene før kursdeltakelse med skårene frem i tid, vil det dokumenteres eventuelle effekter av KiB inntil tre år etter fullført kurs. FHI er ansvarlig for lagring av dataene, analysene og publiseringen. Forskningsprosjektet ventes avsluttet i 2013.

For mer informasjon om forskningsprosjektet, kontakt forsker ved FHI Gry Anette Sælid, mob 916 90 517, grsa@fhi.no

Appendix II; The questionnaire (this version is for participants on sick leave, prior the participation in the CWS course (M₁), however, only the first page is slightly different from the other occasions)

SPØRRESKJEMA - på forsamtalet

A) For å kartlegge eventuelle sykemeldinger, medisinbruk og behandlingsformer, blir alle deltakerne i studien bedt om å svare på spørsmålene nedenfor. Vennligst kryss av:

Kjønn

Mann

Kvinne

Alder

20-30

31-40

41-50

51-60

61-70

Arbeidstitel (vennligst skriv med blokkbokstaver)

Sivilstatus

Gift

Skilt

Enke/enkemann

Samboer

Singel

Utdannelse

Ungdomsskole

Gymnas/fagbrev

3-årig videre utdanning

4-årig eller mer videre
utdanning

Hvor ofte har du vært til fastlegen de siste 12 måneder på grunn av at du har følt deg nedfor eller utslitt?

0 ganger

1 gang

2 ganger

3 ganger

Flere enn 3 ganger

Har du vært sykmeldt hele perioden (siste 12 måneder)?

Ja

Nei, er ikke sykmeldt

Har vært sykmeldt deler av perioden

Hvor lenge har du vært sykmeldt, vennligst oppgi uker ----- eller måneder-----

Hvis du ikke er 100 % sykmeldt, vennligst oppgi prosentandel du er sykmeldt i dag: ----

Hvor mange ganger har du vært sykmeldt de siste 12 måneder?

0 ganger

1 gang

2 ganger

3 ganger

Flere enn 3 ganger

Er årsaken til sykemeldingen at du føler deg nedfor eller utslitt?

Ja

Nei

Er ikke sykmeldt



Hvis du er på rehabilitering, vennligst oppgi prosentandel: -----

Bruker du medisiner mot at du føler deg nedfor eller utslitt?

Ja Nei

Går du til behandling/veiledning hos:

Psykolog	Psykiater	Får tilbud om hjelp/tiltak ved HMS-avd.	Får tilbud om tiltak ved NAV	Andre/ annet	Går ikke i behandling/veil.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B) Her er 21 grupper med utsagn. Vennligst studer hver gruppe nøye. Plukk så ut det utsagn i hver gruppe som best beskriver hvordan du har hatt det **den siste uken, dagen i dag inkludert!** Sett en ring rundt tallet utenfor det utsagn du plukket ut. Hvis flere av utsagnene i gruppen synes å passe like godt, setter du ring rundt hver av dem.

Vær sikker på at du leser alle utsagn i hver gruppe før du velger.

Jeg føler meg ikke trist.

- 0 Jeg føler meg trist.
- 1 Jeg er trist hele tiden og klarer ikke å løsrive meg fra denne følelsen.
- 2 Jeg er så trist og ulykkelig at jeg holder ikke ut.

0 Jeg føler meg ikke særlig motløs med hensyn til fremtiden.

- 1 Jeg føler meg motløs med hensyn til fremtiden.
- 2 Jeg føler at jeg ikke har noe å se frem til.
- 3 Jeg føler at fremtiden er håpløs og at det ikke er håp om noen bedring.

0 Jeg føler meg ikke mislykket.

- 1 Jeg føler at jeg har mislyktes mer enn de fleste.
- 2 Når jeg ser bakover i livet mitt, ser jeg bare en serie nederlag.
- 3 Jeg føler meg som en helt og holdent mislykket person.

0 Jeg opplever like mye tilfredsstillelse som tidligere i ting jeg foretar meg.

- 1 Jeg har ikke lenger samme glede av ting som jeg hadde tidligere.
- 2 Jeg får ingen virkelig tilfredsstillelse i noe lenger.
- 3 Jeg er motløs og finner ikke glede i noe.

- 0 Jeg føler meg ikke spesielt skyldbetinget.
1 Jeg føler meg skyldbetinget av og til.
2 Jeg føler meg skyldbetinget mesteparten av tiden.
3 Jeg føler meg skyldbetinget hele tiden.
- 0 Jeg føler ikke at jeg blir straffet.
1 Jeg føler at jeg kanskje blir straffet.
2 Jeg forventer å bli straffet.
3 Jeg føler at jeg blir straffet.
- 0 Jeg føler meg ikke skuffet over meg selv.
1 Jeg er skuffet over meg selv.
2 Jeg føler avsky over meg selv.
3 Jeg hater meg selv.
- 0 Jeg føler ikke at jeg er verre enn andre.
1 Jeg er kritisk overfor meg selv for min svakhet og mine feil.
2 Jeg anklager meg selv hele tiden for mine feil.
3 Jeg anklager meg selv for alle ting som skjer.
- 0 Jeg har ingen tanker om å ta livet av meg.
1 Jeg har tanker om å ta livet av meg, men jeg vil ikke gjennomføre det.
2 Jeg har lyst til å ta livet av meg.
3 Jeg ville ta livet av meg hvis jeg hadde muligheten.
- 0 Jeg gråter ikke mer enn vanlig.
1 Jeg gråter mer nå enn jeg pleier.
2 Jeg gråter hele tiden.
3 Jeg pleide å kunne gråte, men nå kan jeg ikke gråte selv om jeg ønsker det.
- 0 Jeg er ikke mer irritert nå enn jeg vanligvis er.
1 Jeg blir lettere misfornøyd eller irritert enn jeg pleier.
2 Jeg føler meg irritert hele tiden.
3 Jeg blir i det hele tatt ikke irritert over de tingene som pleide å irritere meg.
- 0 Jeg har ikke mistet interessen for andre mennesker.
1 Jeg er mindre interessert i andre mennesker enn jeg er til vanlig.
2 Jeg har mistet mesteparten av interessen for andre mennesker.
3 Jeg har mistet all min interesse for andre mennesker.



- 0 Jeg tror ikke det er vanskeligere for meg enn vanlig å ta avgjørelser.
- 1 Jeg utsetter å ta avgjørelser oftere enn vanlig.
- 2 Jeg har større vanskeligheter med å ta avgjørelser nå enn tidligere.
- 3 Jeg kan ikke ta avgjørelser lenger.

- 0 Jeg føler ikke at jeg ser verre ut enn vanlig.
- 1 Jeg bekymrer meg over at jeg ser gammel og lite tiltrekkende ut.
- 2 Jeg føler at mitt utseende er forandret på en måte som gjør at jeg er lite tiltrekkende.
- 3 Jeg synes jeg ser stygg ut.

- 0 Jeg kan arbeide omtrent like bra som før.
- 1 Jeg trenger mer energi for å få satt i gang med noe.
- 2 Jeg må tvinge meg selv til å få satt i gang med noe.
- 3 Jeg greier ikke lenger å arbeide.

- 0 Jeg sover like godt som vanlig.
- 1 Jeg sover ikke så godt som jeg pleide.
- 2 Jeg våkner 1-2 timer tidligere enn vanlig og opplever det vanskelig å sovne igjen.
- 3 Jeg våkner opp flere timer tidligere enn vanlig og greier ikke å sovne igjen.

- 0 Jeg er ikke mer trett enn vanlig.
- 1 Jeg blir fortere trett enn vanlig.
- 2 Nesten alt gjør meg trett.
- 3 Jeg er for trett til å gjøre noe.

- 0 Matlysten min er ikke dårligere enn vanlig.
- 1 Matlysten min er ikke så god som den pleier.
- 2 Matlysten min er mye dårligere nå.
- 3 Jeg har ingen matlyst lenger.

- 0 Jeg har gått lite eller ingenting ned i vekt i det siste.
- 1 Jeg har gått ned mer enn 2,5 kg.
- 2 Jeg har gått ned mer enn 5,0 kg.
- 3 Jeg har gått ned mer enn 7,5 kg.

Jeg går *med hensikt* ned i vekt ved å spise mindre:

Ja _____ Nei _____

- 0 Jeg er ikke mer bekymret for helsa enn vanlig.
- 1 Jeg er mer bekymret over fysiske problemer, slik som smerter og plager, urolig mage eller forstoppelse.
- 2 Jeg er svært bekymret over fysiske problemer og det er vanskelig å tenke på noe særlig annet.
- 3 Jeg er så bekymret over fysiske problemer at jeg ikke kan tenke på noe annet.

- 0 Jeg har ikke merket noen forandring i min seksuelle interesse i det siste.
- 1 Jeg er litt mindre seksuelt interessert enn vanlig.
- 2 Jeg er mye mindre seksuelt interessert i øyeblikket.
- 3 Jeg har mistet all interesse for det seksuelle.

C) I det følgende ber vi om din vurdering av din egen helse og hva du synes om livet i sin alminnelighet. Hvis du er usikker på hvordan du skal besvare et spørsmål, prøv å tenke på din totale helsesituasjon og det riktige svaret du kan komme på. Bruk ikke for lang tid til å svare på dette, da ditt spontane svar mest sannsynlig vil være det riktige.

Sett ring bare rundt ett tall

I sin alminnelighet, vil du si at din helse er:

Særdeles god..... 5
Meget god..... 4
God..... 3
Ikke så god..... 2
Dårlig..... 1

Sammenlignet med din helse for ett år siden, hvordan vil du si den er i dag:

Mye bedre enn for et år siden 5
Noe bedre nå enn for et år siden 4
Ingen forandring 3
Noe verre nå enn for et år siden 2
Mye verre nå enn for et år siden 1



HELSE OG DAGLIGE AKTIVITETER

Har du i løpet av **de siste fire uker** hatt noen av de følgende problemer når det gjelder ditt arbeid eller vanlige daglige aktiviteter som **følge av følelsesmessige, psykiske problemer** (som depresjon eller angst):

Kryss av kun ja eller nei ved hvert spørsmål

- Måttet skjære ned på den tiden du brukte til arbeid eller andre aktiviteter? Ja Nei
- Fått utført mindre enn du ønsket? Ja Nei
- Utførte ikke arbeid eller andre ting så omhyggelig som vanlig? Ja Nei

De neste spørsmålene handler om hvordan du har følt deg og hvordan du har hatt det **de siste fire ukene**. For hvert spørsmål, vennligst velg det svaralternativet som best beskriver hvordan du har hatt det. **Hvor ofte i løpet av de siste fire ukene har du:**
Sett ett kryss på hver linje.

	Hele tiden	Nesten hele tiden	Mye av tiden	En del av tiden	Litt av tiden	Ikke i det hele tatt
Følt deg full av tiltakslyst?....	<input type="checkbox"/>					
Følt deg veldig nervøs?.....	<input type="checkbox"/>					
Vært så langt nede at ingenting har kunnet muntre deg opp?.....	<input type="checkbox"/>					
Følt deg rolig og harmonisk?.....	<input type="checkbox"/>					
Hatt mye overskudd?.....	<input type="checkbox"/>					

	Hele tiden	Nesten hele tiden	Mye av tiden	En del av tiden	Litt av tiden	Ikke i det hele tatt
Følt deg nedfor og trist?.....	<input type="checkbox"/>					
Følt deg sliten?.....	<input type="checkbox"/>					
Følt deg glad?.....	<input type="checkbox"/>					
Følt deg trett?.....	<input type="checkbox"/>					

D) Sett ett kryss for hvert spørsmål:

Hvor mange mennesker står deg så nær at du kan regne med dem hvis du har store personlige problemer?

- Ingen.....
- 1 eller 2.....
- 3 til 5.....
- Mer enn 5.....

Hvor stor interesse viser folk for det du gjør?

- Stor deltagelse og interesse.....
- Noe deltagelse og interesse.....
- Usikker.....
- Litt deltagelse og interesse
- Ingen deltagelse og interesse.....

Hvor lett er det å få praktisk hjelp fra naboer om du skulle trenge det?

- Meget lett.....
- Lett.....
- Mulig.....
- Vanskelig.....
- Meget vanskelig.....



E) Har noe av det følgende hendt deg i løpet av de siste seks måneder? Sett ett kryss på hver linje.

	Denne måneden	Forrige mnd (en mnd siden)	To mnd siden	Tre mnd siden	Fire mnd siden	Fem mnd siden	Seks mnd siden
Du har selv vært utsatt for alvorlig sykdom, skade eller overfall							
En av dine nærmeste har vært alvorlig syk, utsatt for skade eller overfall							
Din mor eller far, din ektefelle/samboer eller barn er avgått ved døden							
En nær familievenn eller annen slektning (tante, kusine, besteforeldre) er avgått ved døden							
Du er separert grunnet vanskeligheter i ekteskapet							
Du har brutt et langvarig forhold							
Du har hatt et alvorlig problem med en nær venn, nabo eller slektning							
Du er blitt arbeidsledig eller søkt forgjeves etter ny jobb i mer enn en måned							
Du er blitt avskjediget fra din jobb							
Du har alvorlige økonomiske problemer							
Du har hatt problemer med politiet og blitt fremstilt for retten							
Noe du satte stor pris på er mistet eller blitt stjålet							

Hvis du har opplevet én eller flere av disse livshendelsene i løpet av de **siste seks måneder**, vær vennlig og svare på følgende spørsmål:

Fikk du følelsesmessig støtte fra noen i forbindelse med hendelsen? Hvis du hadde mer enn én livshendelse, vær snill å krysse av for den mest alvorlige.

Vennligst kryss av i **én** rute.

Ja, mye støtte

Ja, noe støtte

Nei, ingen støtte.....

Fra hvem fikk du følelsesmessig støtte? Du kan krysse av i mer enn én rute.

Ektefelle/partner.....

Foreldre.....

Bror/søster

Barn.....

Venn (ikke nabo)

Nabo

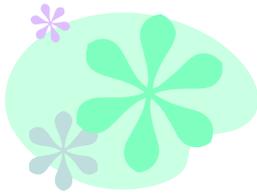
Andre slektninger.....

Andre.....

F) Hvor riktige er følgende utsagn for deg?

Vennligst sett en ring rundt de svarene som passer best for deg.

	Helt galt	Nokså galt	Nokså riktig	Helt riktig
Jeg klarer alltid å løse vanskelige problemer hvis jeg prøver hardt nok.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hvis noen motarbeider meg, så kan jeg finne måter og veier for å få det som jeg vil.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Det er lett for meg å holde fast på planene mine og nå målene mine.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg føler meg trygg på at jeg vil kunne takle uventede hendelser på en effektiv måte.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Takket være ressursene mine så vet jeg hvordan jeg skal takle uventede situasjoner.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg kan løse de fleste problemer hvis jeg går tilstrekkelig inn for det.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	Helt galt	Nokså galt	Nokså riktig	Helt riktig
Jeg beholder roen når jeg møter vanskeligheter, fordi jeg stoler på mestringsevnene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Når jeg møter et problem, så finner jeg vanligvis flere løsninger på det.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hvis jeg er i knipe, så finner jeg vanligvis en vei ut.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samme hva som hender, så er jeg vanligvis i stand til å takle det.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G) Du oppfatter deg selv akkurat nå:

Under er det 10 utsagn om hvordan du oppfatter deg selv. Vennligst les hvert utsagn nøye og sett et merke på det svaralternativet som ligger nærmest måten du oppfatter deg selv for øyeblikket. Sett ring rundt ordene ”veldig enig”, hvis du er helt enig i utsagnet. Sett en ring rundt ”enig”, hvis du er enig, men ikke helt. Sett en ring rundt ”uenig”, hvis du er uenig, men ikke helt. Sett ring rundt ”veldig uenig”, hvis du tror utsagnet absolutt ikke beskriver måter du oppfatter deg selv på.

Det er ingen riktige eller gale svar. Vennligst ikke hopp over utsagn. Ikke bruk for mye tid på noen av spørsmålene.

LES NÅ HVERT UTSAGN NØYE OG KRYSS AV FOR DE SVARENE SOM BEST
ANGIR HVORDAN DU OPPFATTER DEG SELV AKKURAT NÅ

	Veldig enig	Enig	Uenig	Veldig uenig
I det store og hele er jeg fornøyd med meg selv.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Av og til synes jeg at jeg ikke er noe tess i det hele tatt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg synes jeg har mange gode kvaliteter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Jeg synes ikke jeg har mye å være stolt av.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg kan utføre ting like bra som andre folk.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Av og til føler jeg meg virkelig unyttig.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg mener jeg er verdt noe, er i alle fall like bra som andre.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg skulle ønske jeg hadde selvrespekt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg tenker positivt om meg selv.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stort sett har jeg en tendens til å føle at jeg er mislykket.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

H) Kryss av ved hvert utsagn for det svaralternativet som best avspeiler deg selv og din arbeidssituasjon. Svar i hvert tilfelle slik du for tiden føler deg. Vær så ærlig og oppriktig som mulig.

	1 Svært uenig	2 Stort sett uenig	3 Litt uenig	4 Litt enig	5 Stort sett enig	6 Svært enig
Jeg føler meg nedlesset av arbeid.....	<input type="checkbox"/>					
Egentlig har jeg sjelden helt fri fra jobben, fordi jeg stadig omgås kolleger etter arbeidstid (treffes privat, telefonkontakt o.l.).....	<input type="checkbox"/>					
Jeg opplever at jeg gir mer av meg selv til andre mennesker enn jeg får tilbake....	<input type="checkbox"/>					
Jeg har stadig en følelse av at jeg ikke strekker til.....	<input type="checkbox"/>					
Jeg opplever en følelsesmessig distanse til de jeg omgås.....	<input type="checkbox"/>					
Jeg stiller stadig spørsmål ved om det jeg gjør er verdt noe.....	<input type="checkbox"/>					



	1 Svært uenig	2 Stort sett uenig	3 Litt uenig	4 Litt enig	5 Stort sett enig	6 Svært enig
Mine ønsker om å stimulere andre gjennom mitt arbeid er større enn det jeg faktisk får utrettet.....	<input type="checkbox"/>					
Jeg er ofte motløs på arbeid og tenker derfor stadig på å slutte i jobben.....	<input type="checkbox"/>					
Jeg blir hyppig irritert i jobben.....	<input type="checkbox"/>					
Ofte sover jeg dårlig på grunn av forhold på jobben.....	<input type="checkbox"/>					
Jeg har gradvis opplevd at jeg har mindre å gi på det følelsesmessige plan.....	<input type="checkbox"/>					
Jeg har vansker med å omgås enkelte av de jeg jobber sammen med.....	<input type="checkbox"/>					
Da jeg begynte i min nåværende jobb hadde jeg større forhåpninger til arbeidet og min egen arbeidsinnsats enn det jeg nå har.....	<input type="checkbox"/>					
Jeg synes det er vanskelig å engasjere seg fullt ut i problemene og behovene til de jeg treffer gjennom arbeidet.....	<input type="checkbox"/>					
I det siste har jeg følt meg så nedkjørt at jeg har blitt tvunget til å redusere kontakten med de andre på jobben.....	<input type="checkbox"/>					
Arbeidspresset har forårsaket private vansker (for eksempel i ekteskap, familie, kontakt med venner).....	<input type="checkbox"/>					
Også når jeg har fri tenker jeg mye på forhold ved jobben.....	<input type="checkbox"/>					
Jeg føler meg trett under arbeidsdage....	<input type="checkbox"/>					

Jeg tenker en del på å finne meg ny jobb.....	<input type="checkbox"/>					
Jeg opplever ofte vansker med å konsentrere meg om det som skjer på jobben.....	<input type="checkbox"/>					
Skal jeg være helt ærlig følte jeg meg mer ”verdt” i arbeidet tidligere.....	<input type="checkbox"/>					
Jeg opplever at jeg gradvis har mistet interessen for de mennesker jeg treffer gjennom jobben.....	<input type="checkbox"/>					
Jeg synes aldri jeg får nok tid til å gi hjelp eller støtte til kolleger eller til folk jeg treffer gjennom jobben.....	<input type="checkbox"/>					
Jeg opplever et stort sprik mellom innsats og økonomisk uttelling (lønn)	<input type="checkbox"/>					
Jeg har til stadighet dårlig samvittighet da jeg p.g.a. arbeidsmessige forhold må forsømme eller forsake familien	<input type="checkbox"/>					

HJERTELOG TAKK FOR AT DU FYLTE UT SKJEMAET!

Appendix III; the first page of the questionnaire across measurements occasions ($M_1 - M_8$) and the evaluation form

Questions (on the first page of the questionnaire) for participants not on sick leave, prior the participation in the CWS course (M₁)

A) For å kartlegge eventuelle sykemeldinger, medisinbruk og behandlingsformer, blir alle deltakerne i studien bedt om å svare på spørsmålene nedenfor. Vennligst kryss av:

Kjønn

Mann Kvinne

Alder

20-30 31-40 41-50 51-60 61-70

Arbeidstittel (vennligst skriv med blokkbokstaver)

Sivilstatus

Gift Skilt Enke/enkemann Samboer Singel

Utdannelse

Ungdomsskole Gymnas/fagbrev Mer enn 3-årig videre utdanning Mer enn 4-årig videre utdanning

Hvor ofte har du vært til fastlegen de siste 12 måneder på grunn av at du har følt deg nedfor eller utslitt?

0 ganger 1 gang 2 ganger 3 ganger Flere enn 3 ganger

Har du vært sykmeldt i løpet av de siste 12 måneder?

Ja Nei, er ikke sykmeldt Har vært sykmeldt deler av perioden

Hvis du har vært sykmeldt, skyltes deler eller hele sykefraværet at du følte deg nedfor eller utslitt?

Ja, deler Ja, hele Nei Er ikke sykmeldt

Hvis du har vært sykmeldt, hvor mange ganger har du vært sykmeldt de siste 12 måneder?

0 ganger 1 gang 2 ganger 3 ganger Flere enn 3 ganger

Bruker du medisiner mot at du føler deg nedfor eller utslitt?

Ja Nei

Går du til behandling/veiledning hos:

Psykolog	Psykiater	Får tilbud om hjelp/tiltak ved HMS-avd.	Får tilbud om tiltak ved NAV	Andre/ annet	Går ikke i behandling/veil.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions for participants on sick leave, on the first course day (M₃)

A) For å kartlegge *eventuelle endinger* i antall sykemeldninger, medisinbruk og behandlingsformer, blir alle deltakerne i studien bedt om å svare på spørsmålene nedenfor.

Vennligst kryss av:

Har du siden forrige gang du fylte ut dette skjemaet, endret sivilstatus?

Ja Nei

Vennligst kryss av for riktig sivilstatus:

Gift Skilt Enke/enkemann Samboer Singel

Føler du deg nedfor eller utslitt?

Ikke i det hele tatt Sjelden Noen ganger Ofte Svært ofte

Har du siden forrige gang du fylte ut dette skjemaet, vært hos fastlegen på grunn av at du har følt deg nedfor eller utslitt?

Ja Nei

Har du vært sykmeldt hele perioden (siden forrige gang du fylte ut skjemaet)?

Nei, er ikke sykmeldt Ja Har vært sykmeldt deler av perioden

Hvis du er sykmeldt, skyldes sykefraværet at du føler deg nedfor eller utslitt?

Er ikke sykemeldt Ja Nei

Hvis du er sykmeldt, skyldes deler av sykefraværet at du føler deg nedfor eller utslitt?

Er ikke sykemeldt Ja Nei

Hvis du er sykmeldt, vennligst oppgi prosentandel du er sykmeldt:-----

Hvis du er på rehabilitering, vennligst oppgi prosentandel: -----

Bruker du medisiner mot at du føler deg nedfor eller utslitt?

Ja

Nei

Går du til behandling/veiledning hos:

Psykolog	Psykiater	Får tilbud om hjelp/tiltak ved HMS-avd.	Får tilbud om tiltak ved NAV	Andre/ annet	Går ikke i behandling/veil.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions for participants not on sick leave, on the last course day (M₂/M₄)

A) For å kartlegge *eventuelle endinger* i antall sykemeldinger, medisinbruk og behandlingsformer, blir alle deltakerne i studien bedt om å svare på spørsmålene nedenfor.

Vennligst kryss av:

Har du siden forrige gang du fylte ut dette skjemaet, endret sivilstatus?

Ja Nei

Vennligst kryss av for riktig sivilstatus:

Gift Skilt Enke/enkemann Samboer Singel

Føler du deg nedfor eller utslitt?

Ikke i det hele tatt Sjelden Noen ganger Ofte Svært ofte

Har du siden forrige gang du fylte ut dette skjemaet, vært hos fastlegen på grunn av at du har følt deg nedfor eller utslitt?

Ja Nei

Hvis du er sykmeldt, skyldes sykefraværet at du føler deg nedfor eller utslitt?

Ja Nei Er ikke sykmeldt

Hvis du er sykmeldt, skyldes deler av sykefraværet at du føler deg nedfor eller utslitt?

Ja Nei Er ikke sykmeldt

Hvis du er sykmeldt, vennligst oppgi prosentandel du er sykmeldt:-----

Bruker du medisiner mot at du føler deg nedfor eller utslitt?

Ja Nei

Går du til behandling/veiledning hos:

Får tilbud om	Får tilbud				
Psykolog	Psykiater	hjelp/tiltak ved HMS-avd.	om tiltak ved NAV	Andre/ annet	Går ikke i behandling/veil.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions for participants on sick leave, on the last course day (M₂/M₄)

A) For å kartlegge *eventuelle endinger* i antall sykemeldinger, medisinbruk og behandlingsformer, blir alle deltakerne i studien bedt om å svare på spørsmålene nedenfor.

Vennligst kryss av:

Har du siden forrige gang du fylte ut dette skjemaet, endret sivilstatus?

Ja Nei

Vennligst kryss av for riktig sivilstatus:

Gift Skilt Enke/enkemann Samboer Singel

Føler du deg nedfor eller utslitt?

Ikke i det hele tatt Sjelden Noen ganger Ofte Svært ofte

Har du siden forrige gang du fylte ut dette skjemaet, vært hos fastlegen på grunn av at du har følt deg nedfor eller utslitt?

Ja Nei

Har du vært sykmeldt hele perioden (siden forrige gang du fylte ut skjemaet)?

Nei, er ikke sykmeldt Ja Har vært sykmeldt deler av perioden

Hvis du er sykmeldt, skyldes sykefraværet at du føler deg nedfor eller utslitt?

Er ikke sykemeldt Ja Nei

Hvis du er sykmeldt, skyldes deler av sykefraværet at du føler deg nedfor eller utslitt?

Er ikke sykemeldt Ja Nei

Hvis du er sykmeldt, vennligst oppgi prosentandel du er sykmeldt:-----

Hvis du er på rehabilitering, vennligst oppgi prosentandel: -----

Bruker du medisiner mot at du føler deg nedfor eller utslitt?

Ja Nei

Går du til behandling/veiledning hos:

Psykolog

Psykiater

Får tilbud om
hjelp/tiltak ved
HMS-avd.

Får tilbud
om tiltak ved
NAV

Andre/
annet

Går ikke i
behandling/veil.

Questions for participants on both sick leave and not sick leave, the same on across all measurement occasions at the follow ups (M₅-M₈)

A) For å kartlegge *eventuelle endringer* i antall sykemeldinger, medisinbruk og behandlingsformer, blir alle deltakerne i studien bedt om å svare på spørsmålene nedenfor.

Vennligst kryss av:

Har du siden forrige gang du fylte ut dette skjemaet, endret sivilstatus?

Ja Nei

Vennligst kryss av for riktig sivilstatus:

Gift Skilt Enke/enkemann Samboer Singel

Føler du deg nedfor eller utslitt?

Ikke i det hele tatt Sjelden Noen ganger Ofte Svært ofte

Har du siden forrige gang du fylte ut dette skjemaet, vært hos fastlegen på grunn av at du har følt deg nedfor eller utslitt?

Ja Nei

Har du vært sykmeldt siden forrige gang du fylte ut skjemaet?

Nei, er ikke sykmeldt Ja Har vært sykmeldt deler av perioden

Hvis du er sykmeldt, skyldes sykefraværet at du føler deg nedfor eller utslitt?

Er ikke sykemeldt Ja Nei

Hvis du er sykmeldt, skyldes deler av sykefraværet at du føler deg nedfor eller utslitt?

Er ikke sykemeldt Ja Nei

Hvis du er sykmeldt, vennligst oppgi prosentandel du er sykmeldt:-----

Hvis du er på rehabilitering, vennligst oppgi prosentandel: -----

Bruker du medisiner mot at du føler deg nedfor eller utslitt?

Ja

Nei

Går du til behandling/veiledning hos:

Psykolog	Psykiater	Får tilbud om hjelp/tiltak ved HMS-avd.	Får tilbud om tiltak ved NAV	Andre/ annet	Går ikke i behandling/veil.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The evaluation form

EVALUERING AV KURSET

Vennligst sett ett kryss på det utsagnet du er enig i:

1) Hvordan var det å være kursdeltaker?

Svært bra	Meget bra	Bra	Nøytral/vet ikke	Dårlig	Meget dårlig	Svært dårlig
1	2	3	4	5	6	7

Vennligst begrunn hvorfor:

2) Hvor nyttig/lærerikt var kurset for deg?

Svært mye	Mye	Nøytral/vet ikke	Lite	Svært lite
1	2	3	4	5

3) Dersom du mener kurset var nyttig, vennligst beskriv noe som var spesielt lærerikt:

1) _____

2) _____

3) _____

4) I hvilken grad bruker du mestringsteknikkene du har lært på kurset?

Svært ofte	Meget ofte	Ofte	Nøytral/vet ikke	Lite	Meget lite	Svært lite
1	2	3	4	5	6	7

5) Bidrar kurset til at du takler utfordringer på jobben bedre?

JA: NEI: Vet ikke Taklet utfordringene på jobben like bra før kurset:

6) Bidrar kurset til at du takler utfordringer utenfor jobben bedre?

JA: NEI: Vet ikke Taklet utfordringene utenfor jobben like bra før kurset:

7) Har du andre kommentarer?

HJERTELIG TAKK FOR AT DU FYLTE UT SKJEMAET!

