

Thesis for doctoral degree (Ph.D.)  
2020

---

# Reduced working hours and stress in the Swedish social services

Peter Barck-Holst



**Karolinska  
Institutet**

From THE DEPARTMENT OF CLINICAL NEUROSCIENCE  
Karolinska Institutet, Stockholm, Sweden

# **REDUCED WORKING HOURS AND STRESS IN THE SWEDISH SOCIAL SERVICES**

Peter Barck-Holst



Stockholm 2020

All previously published papers were reproduced with permission from the publisher.  
Published by Karolinska Institutet.  
Printed by Universitetservice US-AB  
© Peter Barck-Holst, 2020  
ISBN 978-91-7831-812-4

Reduced working hours and stress in the Swedish social services  
THESIS FOR DOCTORAL DEGREE (Ph.D.)

By

**Peter Barck-Holst**

*Principal Supervisor:*

Associate Professor Carina Hellgren  
Karolinska Institutet  
Department of Clinical Neuroscience  
Division of Psychology

*Co-supervisor(s):*

Professor Emeritus Åsa Nilssonne  
Karolinska Institutet  
Department of Clinical Neuroscience  
Centre for Psychiatry Research

Professor Torbjörn Åkerstedt  
Karolinska Institutet  
Department of Clinical Neuroscience  
Division of Psychology  
Stockholm University  
Stress Research Institute

*Opponent:*

Associate Professor Pia Tham  
University of Gävle  
Faculty of Health and Occupational Studies  
Division of Social Work

*Examination Board:*

Associate Professor Osman Aytar  
Mälardalen University  
School of Health, Care and Social Welfare  
Division of Social Work

Associate Professor Ali Hajighasemi  
Södertörn University  
Department of Social Work  
School of Social Sciences

Associate Professor Aila Collins  
Karolinska Institutet  
Department of Clinical Neuroscience  
Division of Psychology



Dedicated to the National Institute for Working Life.



## ABSTRACT

**Background:** Since a financial crisis in the 1990's employees in the Swedish public sector have suffered from work stress and related consequences such as long-term sick leave. Reduced working hours has long been debated in Sweden as a possible way of improving psychosocial health, and was therefore empirically evaluated in a large, quasi-experimental trial in four public sectors; care and welfare, call centers, technology, and the social services. Working hours were reduced by 25 percent and workload reduced in proportion to this, and employers received financial compensation in order to be able to hire temporary extra staff. Social work in Sweden has been identified as a particularly exposed and vulnerable part of the public sector, subject to problems with employee retention and stress-related disorders. Therefore a specific study was made of social workers during the trial, in order to contribute to the scant body of research on interventions that may reduce work-related stress in social work.

**Aims:** Study I explored the effect of reduced working hours on stress, symptoms of exhaustion syndrome, and related work-characteristics, in the participating social workers. Study II studied the impact of reduced working hours on stress, stressful situations, work and free-time stress, coping behaviour, situational reactivity, and burnout symptoms, at one of the participating social work agencies. Study III explored the experience of the social workers at the same agency, in relation to work-life balance, social work and everyday recovery choices. Study IV evaluated the impact of reduced working hours on stress and sleep in all four participating public sectors, with a particular focus on sleep. Study V examined employee time use, and the effect on total workload and time for recovery, in all four sectors.

**Methods:** Studies I-V all used data collected during the reduced working hours trial, which had three measuring points: one at baseline, and two whilst participants in the intervention group were in the reduced working hours condition. Two extensive surveys were administered at each data point, covering a vast array of measures examining psychosocial health, both in terms of individual dimensions and the work environment itself. One of the surveys was constructed in a diary format, where respondents filled out the same measures for seven consecutive days. Study I used multiple regression to analyse the social workers that remained per protocol at the end of the trial ( $n = 127$ ), using both the questionnaire data and the diary survey data. Study II used concurrent mixed-method, collecting data both in the form of structured interviews based on principles from cognitive behavior therapy ( $n = 15$ ), and two surveys only administered at the particular social work agency studied ( $n = 29$ ), the MBI-HSS and ELSS. Study III used structured interviews ( $n = 12$ ), performed at the same agency, and analysed with qualitative content analysis. Study IV used multilevel mixed models ( $n = 580$ ) and the survey diary data from the trial to analyse stress and sleep in all four participating public sectors. Study V also used multilevel mixed models ( $n = 636$ ) and diary data to analyse time-use in all four sectors, reported by respondents in a half-hour format that covered time awake and asleep.



**Results:** Study I found positive effects of reduced working hours in social workers on demands, instrumental manager support. Work intrusion on private life, restorative sleep, stress, memory difficulties, negative emotion, sleepiness, fatigue and exhaustion improved on both workdays and weekends, and sleep quality on weekends. Study II found positive effects of reduced working hours in social workers in burnout, specifically reduced emotional exhaustion, and reduced reactivity in stressful situations. The interviewed described stressful work situations centered on lack of time due to high caseload; emergencies, practical setbacks, deadlines, client aggression, managerial interactions and managerial stress. The stressful home situations described also centered on lack of time; meeting friends, household chores, childcare, practical setbacks, experiencing burnout symptoms. In study III the interviewed social workers to varying degrees described a variety of positive experiences, such as feeling more positive anticipatory emotions when going to work, and going home, improved relationships with colleagues, clients, children, romantic partners, siblings and parents, reduced worry over work and private life, perceived lower risk for burnout, and more time for recovery activities. Study IV found improved sleep quality, reduced sleepiness, stress, worry and stress at bedtime on workdays and days off, in all four public participating sectors, and increased sleep duration in the intervention group during workdays. Study V found that all participants in the four participating public sectors that reduced work hours increased the time they used for relaxing hobby activities and domestic work during workdays, and for free-time activities on days off. Their total workload also decreased and more time was spent recovery activities on workdays, regardless of gender or family status.

**Conclusions:** Stress was reduced, and sleep and work-life balance improved, in all studies that examined these aspects. A daily recovery pattern common to all four public sectors was found, fully compatible with the recovery strategies the social workers described in their interviews. Regardless of public sector, reduced working hours seemed to alleviate stress. This is theoretically supported by well-established theories, which suggests that the intervention reduced stress through reduced demands, reduced workload, reduced exposure to stress, decreased allostatic load, increased control over private demands, improved recovery, more informal social support and positive changes in work-life balance, recovery, mood and sleep.

As for social workers, symptoms of exhaustion syndrome improved, as well as work-life balance, but few organizational dimensions. Professional coping behavior in social work was described as effective and problem-focused at both full-time and during reduced working hours. Stressful social work situations were described as improved due to reduced exposure to work stressors and improved recovery, rather than changes in work content or context, and all time conflicts off-work as resolved. The social workers' experience of work-life balance focused on improved mood and recovery. Reduced working hours seemed to function as a preventive intervention for social workers, which seemed to affect quality of care, facilitate emotion work, and support professional longevity. For on-work recovery to improve, the high caseload described by the interviewed social workers would likely need to be reduced, which future studies of reduced working hours in social work should explore.



## LIST OF SCIENTIFIC PAPERS

- I. Barck-Holst, P., Nilsson, Å., Åkerstedt, T., Hellgren, C. (2017). Reduced working hours and stress in the Swedish social services: A longitudinal study. *International Social Work*, 60(4), 897–913.  
<https://doi.org/10.1177/0020872815580045>
- II. Barck-Holst, P., Nilsson, Å., Åkerstedt, T., Hellgren, C. (2019) Coping with stressful situations in social work before and after reduced working hours, a mixed-methods study, *European Journal of Social Work*, DOI: 10.1080/13691457.2019.1656171
- III. Barck-Holst, P., Nilsson, Å., Åkerstedt, T., Hellgren, C. Reduced working hours and work-life balance - A qualitative study of Swedish social workers participating in a longitudinal trial. *Manuscript*.
- IV. Schiller H, Lekander M, Rajaleid K, Hellgren C, Åkerstedt T, Barck-Holst P, Kecklund G. The impact of reduced worktime on sleep and perceived stress – a group randomized intervention study using diary data. *Scand J Work Environ Health*. 2017;43(2):109–116. doi:10.5271/sjweh.3610
- V. Schiller H., Lekander M., Rajaleid, K., Hellgren, C., Åkerstedt, T., Barck-Holst, P., Kecklund, G. Total workload and recovery in relation to worktime reduction: a randomized controlled intervention study with time-use data, *Occupational and Environmental Medicine* 2018;75:218-226.

## CONTENTS

1	Introduction .....	9
2	Background.....	10
2.1	Work-related complaints in the swedish public sector.....	10
2.2	Relevant Theoretical perspectives on stress .....	10
2.2.1	Allostatic load theory .....	11
2.2.2	Recovery theory .....	11
2.2.3	Coping theory.....	11
2.2.4	The job demand control model and work-life balance .....	12
2.3	Reduced working hours.....	12
2.4	Implications of the transformation of the swedish welfare system in the 1990's for the public sector.....	13
2.4.1	How was social work affected? .....	13
2.5	The specifics of social work.....	14
2.5.1	What working conditions in social work does reduced working hours interact with? .....	15
2.5.2	How is work stress affecting Swedish social workers and clients?.....	15
2.5.3	Work stress in the international context of social work.....	16
2.5.4	What interventions may reduce stress in social work stress? .....	17
3	Aims of the thesis .....	19
3.1	Study I.....	19
3.2	Study II .....	19
3.3	Study III .....	19
3.4	Study IV .....	19
3.5	Study V .....	19
4	Empirical studies .....	21
4.1	Common methodological aspects for study I-V .....	21
4.2	Study I: Reduced working hours and stress in the Swedish social services: A longitudinal study .....	23
4.2.1	Method.....	23
4.2.2	Results .....	24
4.2.3	Conclusions .....	25
4.3	Study II: Coping with stressful situations in social work before and after reduced working hours, a mixed-methods study.....	26
4.3.1	Method.....	26
4.3.2	Results .....	27
4.4	Study III: Reduced working hours and work-life balance - A qualitative study of Swedish social workers participating in a longitudinal trial.....	29
4.4.1	Method.....	29
4.4.2	Results .....	29
4.4.3	Conclusions .....	30

4.5	Study IV: The impact of reduced worktime on sleep and perceived stress – a group randomized intervention study using diary data .....	32
4.5.1	Method.....	32
4.5.2	Results .....	33
4.5.3	Conclusions .....	34
4.6	Study V: Total workload and recovery in relation to worktime reduction: a randomised controlled intervention study with time-use data .....	35
4.6.1	Method.....	35
4.6.2	Results .....	36
4.6.3	Conclusions .....	36
5	Discussion.....	37
5.1	Main findings.....	37
5.2	On recovery and sleep .....	38
5.3	A theoretical model of reduced working hours .....	39
5.4	A note on gender .....	40
5.5	How did reduced working hours interact with the social work context? .....	40
5.5.1	If the central stressor in social work is high caseload, is reduced working hours the solution?.....	42
5.5.2	The meaning of emotions in social work .....	42
5.5.3	Did social work experience make reduced working hours redundant? .....	43
5.5.4	Would reduced working hours be a cost effective solution to work stress in social work? .....	44
5.5.5	Coping in social work and reduced working hours.....	44
5.6	Methodological issues .....	45
5.7	Directions for future research .....	46
6	Concluding remarks .....	48
7	Acknowledgements .....	49
7.1	References .....	50

# 1 INTRODUCTION

In this thesis data is reported from a trial of reduced working hours in the Swedish public sector, where workload was reduced in proportion to the reduction of working hours, and participants salaries remained at their full-time level. The four public sectors included in the trial were call centres, care and welfare workers, technical services and social services. Effects on stress and sleep are examined for all participating public sectors, and the situation of the social workers is studied in-depth.

Work-life research is a fascinating field as it studies our professional lives, which in effect constitute the majority of our time. Although statistics can adjust for differences between professions, the contextual specifics of professions are important to consider. The special focus that was placed on work stress in social work when the trial was designed in 2005, due to their high exposure to stress, is unfortunately no less relevant today. This is why there is a special focus in this thesis on how the challenges and stressors of social work interacted with reduced working hours. The long standing implications of this in term of increased intention leave and work-related complaints imply a high societal cost, in terms of the suffering it entails for social workers and for their clients.

If working conditions are not improved, there is a risk that few in the end will want to work in a low salary profession such as social work, which is devoted to complicated human issues where lives may be at stake, under intense media scrutiny, with a high risk of stress-related disorders. Reduced working hours may have more value as an intervention in professions like social work where life course endurance, and the ability to perform emotion work for decades, is of the essence. This thesis attempts to provide some insight into this, and its results show that reduced working hours may be a starting point. Although it can be asked if not other types of more fine-grained interventions should be implemented, given the fact that such interventions seem not to be forthcoming, one might also ask if not now, then when?

Stockholm, March 2020

## **2 BACKGROUND**

### **2.1 WORK-RELATED COMPLAINTS IN THE SWEDISH PUBLIC SECTOR**

In Sweden every third employee in the care sector, the educational sector, and the social work sector, experience work-related complaints, and the professions with the highest level of work-related complaints are dominated by women, i.e. school teachers, pre-school teachers, youth workers, nurses, assistant nurses, counselors and social workers (Arbetsmiljöverket, 2018). Social work is among the professions with the highest degree of work absence due to work-related complaints (Arbetsmiljöverket, 2018), and have been among one of the professions most exposed to stress-related disorders for decades (Arbetsmiljöverket, 2001, 2012, 2016). In all work sectors in Sweden, women suffer from work-related complaints to a higher degree than men, but in the care sector and the social work sector this disproportionate relationship is the highest (Arbetsmiljöverket, 2018). There is thus a need to thoroughly examine primary organizational interventions in the Swedish public sector that address the material conditions which create and maintain chronic work stress, particularly in professions dominated by women. The directly stressor-related diagnoses adjustment disorder (F43.2) and exhaustion syndrome (F43.8)(Knorrning & Lindström, 1995; Socialstyrelsen, 2003, 2005) account for 50 percent of all sick leave taken in Sweden that lasts more than 14 days, and is due to a psychiatric diagnosis (Försäkringskassan 2017). This situation is, however, not sudden or new. The deleterious long-term effects of the political transformation of working conditions in the Swedish public sector in the 1990's, due to a financial crisis, are well known (Theorell, 2007). Given the aforementioned scale of this problem it is unlikely that individual character traits or vulnerabilities can explain them. Despite this knowledge, and a Swedish economy which is no longer in financial crisis, primary interventions against work stress that change material working condition, like workload or working hours, remain scarce. The preference for secondary interventions, such as stress management courses and flexible work schedules, may be due to their lower cost. This thesis studies reduced working hours in the hope of mitigating the excess of work stress brought on in the public sector by these collective demands. The expectations were that reducing workload and increasing the time for recovery would significantly impact psychosocial health in the public sector employees.

### **2.2 RELEVANT THEORETICAL PERSPECTIVES ON STRESS**

To understand work stress in the public sector it is first necessary to define stress and understand theories of both physiological and psychological stress, as well as theories that relate to organizational working conditions, and their effect on stress on and off work. Much of the research on stress and burnout published in social work research tends to shy away from physiological theories of stress. This thesis tries to address this by being faithful to the nature specifics of social work as a profession, and by using primarily previous research on work stress and burnout among social workers, but also by basing interpretations of well-established physiological and psychological stress theories.

### **2.2.1 Allostatic load theory**

Though stress is not easily defined, a basic definition is that it is psychological and physiological activation in response to demands (SELYE, 1946). This activation then needs to subside when a stressor disappears and leave time for recovery, if not it may, when repeated, lead to allostatic load, an up-regulation of the level of physiological activation (B. S. McEwen & Stellar, 1993; SELYE, 1946). Stress can be triggered both by environmental stressors at work or at home, by major life events, by trauma and by abuse, and its effect is shaped by a complex interplay between how we perceive it, our behavioral response to it, our individual differences, such as our experiences, and our physiological response (Bruce S. McEwen, 2013). Physiologically, chronic stress involves increased secretion of hormones that may help the body in the short run to adapt to stress, but over time chronic stress affects both the body and the brain, to the extent that it may actually lead to disease, which is the foundation of the theory of allostatic load (B. S. McEwen & Stellar, 1993). Allostatic load can affect daily functioning, and lower an individual's decision making ability, memory and learning ability (Bruce S. McEwen, 2006). There is also a connection between allostatic load and psychiatric disorders, such as depression and anxiety disorders (Bruce S. McEwen & Stellar, 2004).

### **2.2.2 Recovery theory**

Allostatic load is important in the understanding of the longitudinal effects of reduced working hours, especially when considered in terms of its interaction with recovery. Recovery theory emphasizes the importance of daily recovery from exposure to work stress both during work hours, for example in the form of breaks, and off-work, in terms of rest and recreation, to off-set work stress and reduce allostatic load (Geurts & Sonnentag, 2006). Sleep, a part of recovery, is also related to allostatic load, sleep deprivation leads to allostatic overload which may have negative effects even when sleep is only restricted to six hours per night (Bruce S. McEwen, 2006).

### **2.2.3 Coping theory**

How we appraise that which stresses us, the meaning we give it, how we view our own resources to cope, and the strategies we use, are central to a psychological view of stress (Lazarus, 1993b). Coping theory is a widely recognized psychological theory of work stress (Lazarus, 1993a) which is compatible with a physiological perspective on stress. Coping involves the thoughts and actions individuals employ when facing stress (Lazarus, 2000). Its focus on cognition and behavior means it shares conceptual dimensions with cognitive behavior therapy, a treatment method primarily concerned with cognition and how the consequences of our behavior govern the choice of our behavior; behavior we perform to achieve positive consequences is considered to be positively reinforced and that which we perform to avoid negative consequences to be negatively reinforced (Corcoran, 2006). In a model of work stress based on cognitive behavior therapy, the way an individual cognitively assesses a situation, and the resources at the disposal of the individual to cope with it, affects what coping behaviour the individual ultimately chooses (Bamber, 2006).



#### **2.2.4 The job demand control model and work-life balance**

Stress is thus neither an isolated psychological response, nor an isolated physiological response, but its context needs to be considered. An important theory of how working conditions affect work stress is the job demand control model, which predicts that high job demands, low control over work, and low social support increases work stress (Karasek & Theorell, 1990) (Johnson & Hall, 1988). This model may also be applicable to private stress, as increased control over free-time is associated with experiencing fewer depressive symptoms over time (Albrecht, Kecklund, Rajaleid, & Leineweber, 2017). A useful theoretical lens to understand process of how stress is transferred from between work and home, usually termed work-life balance, is the loss spiral theory. The loss spiral theory proposes that pressure at work leads to interference between work and home, which leads to exhaustion, which in turn leads to more work-home interference and work pressure (Demerouti, Bakker, & Bulters, 2004).

### **2.3 REDUCED WORKING HOURS**

In Sweden the issue of reduced working hours has long been debated politically in society. Demands for a six-hour work day were first raised in 1972 by the Swedish social democratic women's league, then at several points in time (1978, 1991 and 1996), by the Swedish Trade Union Confederation, Sweden's largest union for public employees (Isidorsson, 2001). However, employers have consistently preferred solutions such as part-time work, which tends to lead to less income and reduced pension for Swedish women, who historically have worked part-time more than Swedish men, and flexible working hour arrangements, which places responsibility on employees to handle collective co-ordination logistics (Isidorsson, 2001). Internationally, the European working time directive dictates that a workweek should not extend beyond 48-hours, as risks to health connected to long work hours have been identified, such as impeded work-life balance, insufficient rest, and safety risks for workers and patients, particularly in the public sector (Deloitte, 2010).

The research conversation has not been as ongoing as the political, although as early as 1997 a review suggested that physical and psychological health risks increase with long work hours (Spurgeon, Harrington, & Cooper, 1997). Unfortunately, many studies of reduced working hours that have tended to have methodological limitations, such as being cross-sectional, lacking control groups, or not reducing workload, only work hours (Bildt & Brynja, 2005). The latter is confusing, as studies that do not reduce workload to the same extent as they reduce work hours in actuality explore something else; the effect of reduced working hours with retained full-time workload. Before the reduced working hours trial on which this thesis rests only one Swedish study, and two Finnish studies, had examined the effect of reducing both work hours and workload to the same degree on social workers. One of the Finnish studies found that exhaustion from work was reduced, and improvements in the quality and availability of social services (Nätti & Anttila, 1999). The other Finnish study found that

reducing working hours reduced work-family conflict, particularly when work time was reduced in the form of 6-hour shifts, rather than being organized in the form of a four day week, with eight-hour workdays (Anttila, Nätti, & Väisänen, 2005). The Swedish study found that the quality of sleep increased, that mental fatigue was reduced, as well as heart and respiratory complaints, and that several factors of a social nature improved (Åkerstedt, Olsson, Ingre, Holmgren, & Kecklund, 2001).

## **2.4 IMPLICATIONS OF THE TRANSFORMATION OF THE SWEDISH WELFARE SYSTEM IN THE 1990'S FOR THE PUBLIC SECTOR**

To understand the effect of reduced working hours in the public sector and on Swedish social workers, the wider national context needs to be considered. The Swedish welfare system has traditionally been labelled as a social-democratic regime type, typical for Scandinavian countries, characterized by de-commodified and universalistic welfare programs, with a strong focus on the right of employment for all, a prerequisite for the maintenance of a welfare system based on solidarity (Esping-Andersen, 1990). Although the Swedish welfare system is characterized by general social service programs that guarantee a high standard of living, in the last decades welfare policy has changed due to factors such as an older population, higher costs of care, lower public resources, unemployment, and problems in the care sector (Meeuwisse, Scaramuzzino, & Swärd, 2011). There has been a large market-oriented change in how welfare services are provided, as a result of a severe economic crisis in the 1990's, which caused political changes that lead to decentralization, more market orientation of services, more user financing, and the state transferring control over welfare services to the Swedish municipalities (Dellgran & Höjer, 2005). Sweden moved away from its well established universalist principles, and the institutional welfare model to which it subscribed (Sunesson et al., 1998). Many negative effects of these transformations were also noted in the public sector, such as an increase in work demands, a lower degree of control and influence for employees, an increase in long-term sick leaves, and negative consequences for mental health, especially among women (Theorell, 2003). Welfare states in Europe were challenged by a second financial crisis in 2008, termed a new age of austerity, but have survived by adopting social investment strategies and by adhering to institutionalized welfare strategies, but have inevitably moved somewhat closer to neoliberalism (Hajighasemi, 2019)

### **2.4.1 How was social work affected?**

Nested within these larger transitions was the practice of Swedish social work, which during the last decades has experienced several changes (Sunesson et al., 1998). In the 1980's new politically mandated demands surfaced that affected the premises for social work; calls for increased client autonomy, more privatization, and a focus on higher rates of production (Hedin & Månsson, 2012). The mass unemployment of the 90's led to welfare expenditure cuts and institutional transformations, which introduced selective mechanisms in the welfare system, which affected the public help provided to individuals (Sunesson et al., 1998). Whilst resources were reduced, and external pressure increased, more young clients were actually in need of preventive measures and emergency measures (Lundström & Vinnerljung, 2001).

Work practices were also transformed, with new strategies brought in from the private sector, such as municipalities outsourcing part of their welfare work to private operators, and new routines for administration (Dellgran & Höjer, 2005). Since then welfare spending has been reduced, and means-tested assistance has been implemented, making Sweden more similar to other countries in Europe, such as Austria, France, Germany and Switzerland (Aspalter, 2008). However, the view of social issues as structural remains the foundation for the Swedish social services (Meeuwisse et al., 2011).

## **2.5 THE SPECIFICS OF SOCIAL WORK**

Swedish social workers are highly educated, and have to undergo 3.5 years of higher education to obtain a social work degree to work as social workers, i.e. a bachelor of social work, and may also add a year and a half to earn a master degree (Frost, Höjer, & Campanini, 2013). Swedish social workers are employed primarily in the public sector and form an integral part of the welfare system, in which the provision of social services is organized by Swedish municipalities (Meeuwisse & Swärd, 2007). The majority of all employees in social work are women (Dellgran & Höjer, 2005). In terms of its practice, social work in Sweden is centered around case management within a legal framework, which puts social workers in a somewhat contradictory dual role in relation to their clients, as both caretakers and controllers (Meeuwisse et al., 2011). There has been a development over time towards social work becoming more specialized, and social work is divided in three principal areas, child welfare, which is also the largest, social assistance and substance abuse (Bergmark & Lundström, 2007). It has been suggested that the trend towards specialization is primarily motivated by hopes for increased efficiency (Meeuwisse et al., 2011). There has also been a trend towards evidence based social work practice in Sweden since the 1990's (Bergmark & Lundström, 2007). Yet when Swedish social work practice was explored in an empirical study the reality was somewhat different, unspecific methods were found to be the most common, and to the extent that manualized methods were used, this was done in a much less structured way than intended, the social workers perceived client relationships as the most important aspect of social work (Perlinski, Blom, & Morén, 2013). Digitalization has occurred in Sweden in social work, as it has occurred in other public sectors. A stake-holder based study of how one social work agency used the same information system between 2007 and 2016 showed that the social workers spent 40 to 60 percent of their time using it, for client problem solving, recording field notes, investigations, choosing and assessing measures, and deciding on institutional placements and residential care (Lagsten & Andersson, 2018). The information system is common in the Swedish municipalities, and several challenges arising from its use was identified for the social workers; it consumed both their time and energy, and there was a disparity between the social handling of client cases and the system-based handling of them, which disrupted workflow (Lagsten & Andersson, 2018). As for their professional standing, social workers in the Nordic countries have internationally been perceived of as being high status professionals (Meeuwisse & Swärd, 2007). However, one Swedish study found that when Swedish social workers were asked to rate their own status, they actually rated it as lower than other professions (Brunnberg, 2001).

### **2.5.1 What working conditions in social work does reduced working hours interact with?**

Not surprisingly, working conditions in Swedish social work deteriorated during the 2000's. One study early in the millennium found that more than half of the studied social workers reported intention to leave, yet almost half of them had only been working as social workers for two years, or not even that (Tham, 2007). A later study comparing social workers' working conditions over the period between 2003 and 2014 found several alarming results; social workers more often had to reorganize their work plans to accommodate client emergencies or staff shortages, intention to leave the workplace or the profession, had increased, and was reported by over half of the study population (Tham, 2018a). Demands were also reported to have increased, whilst control over decisions decreased, and job content has narrowed to primarily consisting of conducting investigations, with less time for caring for clients and advising them, as well as less role clarity, unclear performance expectations, and increased job interference with private life (Tham, 2018a). It has also recently been suggested that lack of time has become a normalized, experience in Swedish social work (Olsson & Sundh, 2018). Where social workers work is also a factor. When working conditions between 2003 and 2014 were compared between social workers in low-income, middle-income and high-income districts, all social workers reported that work tasks had deteriorated, but this was more common in low income districts, as was intention to leave the workplace and work-related health problems, and only in low-income districts did social workers report that their organizations as such also had deteriorated (Tham, 2018b).

When the working conditions of social workers were compared to human service professionals in schools and hospitals in the Swedish public sector, it was found that they were more exposed to problems at work in terms of higher demands, experienced less role clarity, more role conflict and more negative interactions between work and private life, suffered from a more negative organizational climate, and reported a lower degree of management interest in personnel health (Tham & Meagher, 2009). Swedish social workers have also been found to have more difficult working conditions than pre-school and home care workers, in terms of not having enough time for tasks, working in a high tempo, being required to reschedule and reprioritize tasks, facing complicated problems, and using more compensatory strategies such as working more intensively, skipping breaks, bringing their work home and thinking of work at home (Aronsson, Astvik, & Gustafsson, 2014). In a sample of Nordic social workers that uniformly felt that municipal economic interests seemed to be of the same importance to their organizations as the care of their clients, 30 percent of the Swedish social workers stated that lack of time demanded that they fairly often, or often, had to work at a substandard level quality wise (Meeuwisse et al., 2011).

### **2.5.2 How is work stress affecting Swedish social workers and clients?**

Given the working conditions described, it is not surprising that Swedish social workers for decades have been high on the list of professional groups in Sweden that experience stress-related disorders (Arbetsmiljöverket, 2001, 2012, 2016). In a study of recovery profiles

among different occupational groups, 43 percent of the participating Swedish social workers were classified as not recovered, which meant having a higher risk of poor self-rated health, more often reporting stomach aches, headache, muscular pains, insomnia, sadness and sickness presentism, i.e. working whilst sick (Aronsson et al., 2014). Demand-reducing strategies to handle excessive demands have been identified, meaning that stressed Swedish social workers may consciously accept a lower quality of client care to be able to work at all, which can lead to moral conflicts, a sense of resignation, and the knowledge of placing more responsibility on clients than reasonable, whilst that some idealized this strategy as work experience and instead rejected their previous ambitions in regard to clients as naive (Astvik, Melin, & Allvin, 2014).

Whilst there is obvious cause for alarm when it comes to Swedish social workers, the consequences for their clients may also be dire. The Swedish National Board of Health and Welfare has identified several problems related to clients, such as clients reporting long waiting times for decisions that affect them, waiting times for the assessment of children and for child protection measures, problems getting in touch with social workers, and younger clients being in need of more contact with their social workers (Socialstyrelsen, 2008, 2010, 2011). This type of expressions of insufficient resources to handle caseload interact especially poorly with the vulnerable position the clients of the social services find themselves in. Swedish clients have described feeling forced to engage in meaningless job-training and job-seeking, whilst receiving insufficient financial aid, and feeling controlled by, and dependent on, the social services (Marttila, Whitehead, Canvin, & Burström, 2010). Clients have also described that a not agreeing with their social workers on the character of their families' problems could lead to them not being open with social workers, which could obstruct the interventions meant to help them (Löwenborg & Sjöblom, 2009).

### **2.5.3 Work stress in the international context of social work**

Looking at social workers internationally, there seems to be a similar decades-long burden of excessive work stress. Already in the 90's researchers suggested that a culture of stress may exist in social work (Thompson, Stradling, Murphy, & O'Neill, 1996), implying that stress had become dangerously normalized within the profession. Early on, work stress in social work was also linked to retention problems (McLean & Andrew, 1999). There was also early on indications that the quality of social work could suffer due to work stress (Storey & Billingham, 2001). A 2002 review of burnout research in social work stated that there was a higher degree of burnout and stress in social work compared to other professions, and that the social work role existed in the tension between the philosophy of social work, the actual demands of social work, and the work environment, and had been severely affected by administrative, social and political factors (Lloyd, King, & Chenoweth, 2002). In 2015 another review concluded that work stress and burnout among social workers is still common, and identified a number of factors to enhance social worker resilience, such as a positive coping style, personal development, work training of high quality, positive organizational culture, social support, supervisory support and reasonable workload, whilst defensive

organizational culture, weak social support and unreasonable caseload were negatives (McFadden, Campbell, & Taylor, 2015).

#### **2.5.4 What interventions may reduce stress in social work stress?**

There is more research on the prevalence of stress in social work, than on interventions to reduce work stress and its related consequences. It has been found that stressors related to aspects of social work organizations predict work stress in social work better than the personal characteristics of social workers (Collings & Murray, 1996). One review found that retention was increased by interventions that targeted administrative and organizational factors, such as workload, salary and role conflict, and by interventions aimed at specific groups, like newly graduated social workers, such as supervision, autonomy and career progression, whereas interventions targeting individual characteristics were more expensive and less effective (Webb & Carpenter, 2012). Contrary to this, a few studies have evaluated mindfulness as a way to reduce stress in social work. That this lower cost, individual approach is implemented rather than costly interventions targeting workload may not be surprising, given financial restraints placed on the social services in many countries. Empirically, there is not enough data to draw conclusions on mindfulness in social work yet, as only small-scale cross-sectional intervention studies of mindfulness training for social workers, with small samples and without control groups exist. An eight week mindfulness training program with 12 social workers found reduced stress and increased mindfulness during the intervention period (McGarrigle & Walsh, 2011). A recent study, also an eight week-intervention, found increased emotional self-efficacy, psychological flexibility and compassion satisfaction after the intervention had ended, and reduced stress and compassion fatigue (Kinman, Grant, & Kelly, 2019). Although mindfulness offers tools for individuals, other interventions, such as reduced working hours, may reduce stress to a degree that would make mindfulness training an individual choice, not a professional requirement.



### **3 AIMS OF THE THESIS**

The aim of this thesis is to examine the effect of reduced working hours on stress in employees in the public sector, with a specific focus on how the participants in the context of social work in Sweden were affected, in order to be able to discuss the role of the intervention in relation to other types of interventions that may alleviate stress.

#### **3.1 STUDY I**

The aim of study I was to establish if reduced working hours as an intervention had an effect on stress, symptoms of exhaustion syndrome, and psychosocial work characteristics associated with stress and work-life balance in social workers.

#### **3.2 STUDY II**

The aim of study II was to analyse the impact reduced working hours had on stress, stressful situations, work and free-time stressors, coping behaviour, situational reactivity and burnout symptoms in staff at one of the social work agencies participating in the trial, with the intention of understanding more about reduced working hours as an intervention.

#### **3.3 STUDY III**

The aim of study III was to explore the experience of work-life balance during reduced working hours, from the perspective of the social workers at one participating agency. These three research questions guided the study: How does reduced working hours relate to the experience of work-life balance? How does reduced working hours relate to the experience of social work? How does reduced working hours relate to everyday recovery choices?

#### **3.4 STUDY IV**

The aim of study IV was to evaluate if reduced working hours had an impact on sleep and perceived stress in participants from all four participating public sectors.

#### **3.5 STUDY V**

The aim of study V was to examine employee time use in all the public sectors during reduced working hours, and if total workload decreased, in terms of paid and non-paid work, and if time for recovery increased.





## **4 EMPIRICAL STUDIES**

### **4.1 COMMON METHODOLOGICAL ASPECTS FOR STUDY I-V**

Study 1-5 all use data collected during the quasi-experimental, longitudinal trial of reduced working hours that was performed between February 2005 and November 2006 in the Swedish public sector by the Swedish National Institute for Working Life. The aim of the trial was to examine the psychosocial health effects of a 6-hour workday. As the study was financed by the Swedish government, it could only include public organizations, or would otherwise have provided an unfair competition advantage for private organizations taking part in the trial. The public sectors included were call centers, care and welfare, social services, and technical services. The call centers participating were part of the Swedish Board of Student Finance and the national police. The care and welfare sector included public dental services, elderly services, pre-schools, hospitals and health centers. The social services sector included social work agencies. Technical services included municipal traffic service units, municipal technology management, municipal salary administration, parking attendants, construction and airport staff. The government required that the trial be performed with a gender equality perspective, all participating public sectors had a labor force comprised primarily of women, except for technical services, and possible gender differences in effects were also studied.

A nationwide invitation was sent out to public organizations, who could then express their interest to participate, after which they were randomized to participation in the intervention group or to the control group. To be eligible for participation, the majority of the employees in each organization had to work full-time. Organizations were recruited from the care and welfare sector, the social services sector, the tele call sector and the technology sector, all public organizations. The organizations were selected from both urban and rural areas from the whole of Sweden. Once organizations had been assigned to either the experimental intervention condition or the control condition, they could revoke their participation. In essence this means that the study's final sample is a convenience sample.

Employees who participated in the intervention condition had to reduce their total working hours by 25 percent, but were still paid their full-time salary. In order to make sure that participants did not engage in paid work outside of their employment, all legally agreed in writing not to do so, and provided written consent. In order to secure adherence to the study protocol those who reduced their work hours also signed legally binding documents agreeing not to perform any paid work during the trial. In order for workload to be reduced proportionally to the reduced worktime, participating organizations received financial compensation to be able to hire extra staff that could cover the work hours lost. The trial was approved by the Stockholm regional ethical review board, reference number 04-1059/5.

Surveys were distributed by mail to all the participants, at all three data points during the trial. The first data point was while the participants were still working full-time, in February–May 2005, which established baseline values of the measures for all participants. The second data

point was in January-February 2006, after the participants had been in the reduced working hours condition for almost a year. The third data point November 2006, while participants in the intervention group were still in the reduced working hours condition, thus data was collected over a time period of about one and a half years. There were in total two surveys administered to all participants during the trial that they had to fill in at each of the three data collection points. One of the surveys was constructed as a diary, with participants filling in the same measures for seven consecutive days, this data collection format had previously been used to measure work-related stress (Kecklund and Dahlgren, 2002). The other survey was a composite of several pre-existing surveys and indexes that covered a broad spectrum of psychosocial measures, and was filled in once at each data collection point.

There were several stipulated conditions that study participants had to adhere to be able to be categorized as per protocol. Participants had to have worked full-time before the start of the reduced working hours trial. Organizational data regarding work was required for a minimum of 14 of the 18 months in the period of May 2005 to October 2006, and at least two of these months had to be recorded between August and October 2006. Finally, the participants were required to complete the survey at the first baseline measuring point in May 2005, and at either January-February 2006, or November 2006, to be considered per protocol.

## **4.2 STUDY I: REDUCED WORKING HOURS AND STRESS IN THE SWEDISH SOCIAL SERVICES: A LONGITUDINAL STUDY**

### **4.2.1 Method**

#### *4.2.1.1 Participants*

In total seven social service agencies participated in the study, from different regions in Sweden. Three were allocated to the intervention group, three were allocated to the control group. One social service organization was allocated both to the intervention group and the control group, as its structure and size made this suitable. 204 social workers, managers and social work assistants participated in the trial. There were 127 participants in the intervention group (mean age 43.73), of which 104 were women (mean age was 43.50) and 23 men (mean age 44.78). There were 77 participants in the control group (mean age 43.18), of which 71 were women (mean age was 43.30) and 6 men (mean age 41.83).

36 respondents ended their participation during the trial. 11 did so due to having quit their job, eight did so due to taking parental leave, seven went on long-term sick leave, five took a leave of absence, two persons quit out of lack of interest, two participants retired and one participant quit because of studies. Additionally, 43 participants were considered not per protocol at the end of the trial. In this study only per protocol participants with data from the baseline and the last measuring points were included, as long term effects of the intervention were of interest. In the end this left 125 participants (61%) as per protocol. There were 81 participants in the intervention group (mean age 43.77), of which 66 were women (mean age was 43.85) and 15 men (mean age 43.40). There were 44 participants in the control group (mean age 44.82), of which 40 were women (mean age was 45.10) and 4 men (mean age 42.00).

#### *4.2.1.2 Measures*

Questions relevant to the aims of this study were chosen from the two surveys used in the reduced working hours trial (study I, IV and V). From the diary survey measures were chosen that mirrored the symptoms of ICD-10 diagnosis exhaustion syndrome (F43.8A), whose criteria are presented here (translated from Swedish). Criteria 'A' stipulates the presence of physical and psychological exhaustion symptoms for at least 2 weeks, due to one or more identifiable stressors, which in turn have been prevalent during at least 6 months. Criteria 'B' stipulates that significantly lowered psychological energy or endurance dominates the clinical picture. Criteria 'C' stipulates that at least four of six symptoms have been present almost every day for at least two weeks; concentration difficulties or memory difficulties, significantly lowered ability to cope with demands or to perform under conditions of time pressure, emotional instability or irritability, disturbed sleep, significant somatic weakness or easily fatigued, physical symptoms such as aches, chest pains, heart palpitations, intestinal problems, dizziness or sensitivity to sound. Criteria 'D' stipulates that the symptoms cause clinically significant suffering, or lowered function at work, socially or in other important areas. Criteria 'E' stipulates that symptoms are not caused by the direct physiological effects

of some substance (narcotic substance, medication) or by a somatic disease/injury (such as hypothyroidism, diabetes, infectious disease). Finally, criteria 'F' stipulates that if criteria for depression, dysthymia or generalized anxiety disorder are met, exhaustion syndrome may only be used as a secondary diagnosis to the primary diagnosis. The measures selected from the diary survey were a restorative sleep index, a sleep quality index, and a question about sleep length, a stress scale, a stress index, a memory difficulties index, a negative emotion index, the Karolinska Sleepiness Scale and a fatigue and exhaustion index. Cronbach's alpha values ranged from .75-.91 and were generally satisfactory. The measures were then separated in two; a workday index, for Monday to Friday, and a weekend index, for Saturday and Sunday.

The measures chosen from the second survey capture psychosocial aspects of work life that are not likely to shift significantly from day to day, specifically demand, control and social support, instrumental manager support and instrumental co-worker support, work intrusion on private life and private life intrusion. The psychosocial variables had Cronbach's alpha values ranging from .64 to .83, which were generally satisfactory.

#### *4.2.1.3 Data analysis method*

A model was used to test each measure. The model used the baseline value of the measure, where group, gender and age were independent variables, and the value of the measure at the 18-month follow up was the dependant variable. Gender and age were treated as confounders. The purpose was to analyse change over time between groups. An effect measure was provided by the estimated regression coefficient for group, as it estimates the difference in change over time between groups, once baseline, gender and age have been controlled for. A p-value lower than .05 indicates that the difference between groups is statistically significant. As long-term effects were of interest, the data from baseline and the 18-month follow up was used, excluding participants who only had follow-up data from the nine-month follow-up.

## **4.2.2 Results**

As the study was exploratory no hypothesis was put forward, although it seemed probable that symptoms of stress would be reduced.

A difference in change over time was found between groups in demands, instrumental manager support and work intrusion on private life.

A difference in change over time was found between groups during workdays in the restorative sleep index, average stress level, the stress index, the memory difficulties index, the negative emotion index, average sleepiness and the fatigue and exhaustion index.

Also, a difference in change over time was found between groups on weekends, in the restorative sleep index, the sleep quality index, average stress level, the stress index, the memory difficulties index, the negative emotion index, average sleepiness and the fatigue and exhaustion index.

### **4.2.3 Conclusions**

Psychosocial health improved due to reduced working hours having positive effects. Restorative sleep, stress, memory difficulties, negative emotion, sleepiness, fatigue and exhaustion improved on both workdays and on weekends and sleep quality improved on weekends. Demands, manager support and work intrusion on private life in social workers also improved. The results of this study clarified that reduced working hours could indeed alleviate work stress in the Swedish social services.

### **4.3 STUDY II: COPING WITH STRESSFUL SITUATIONS IN SOCIAL WORK BEFORE AND AFTER REDUCED WORKING HOURS, A MIXED-METHODS STUDY**

#### **4.3.1 Method**

A data collection separate from the two main surveys used in the reduced working hours trial was made in autumn 2006, collected at one social work agency in an urban municipality. The participants worked mainly with child welfare, meeting families, teenagers and children. At the agency full-time was usually 39 hours. It was a large agency with a structure that made it possible to include it in the trial as two “workplaces”, one in the intervention group and one in the control group. Quantitative data and qualitative data (interviews) were collected at the same time and integrated when results were interpreted. This is known as concurrent mixed methods methodology (Creswell, 2003). Quantitative data was administered with the hypothesis that burnout symptoms and stress reactivity would be lower in the intervention group, as their workload would be reduced and their recovery opportunities increased.

##### *4.3.1.1 Participants*

Whilst there were 23 social workers in the intervention group, 12 of them were per protocol at the end of the trial, and, similarly, 17 of the 35 social workers in the intervention group remained per protocol. To make sure the results from this study were comparable to the results from the two surveys used in the reduced working hours trial only data from the per protocol participants was analysed.

##### *4.3.1.2 Measures*

The Maslach Burnout Inventory-Human Services Survey (MBI-HSS) was used to measure burnout with three subscales: emotional exhaustion ( $\alpha = .90$ ), depersonalization ( $\alpha = .79$ ) and personal accomplishment ( $\alpha = .71$ ). The Everyday Life Stress Scale (ELSS) was used to measure reactivity related to time urgency and irritation in related to other persons in stressful situations ( $\alpha = .90$ ). The intervention group consisted of 12 persons, three men, and nine women, mean age 45, of which. Two were managers, seven worked as social workers and three as social assistants. The control group consisted of 16 persons, all women, mean age 41, two participants in the control group were managers, and fourteen were social workers.

##### *4.3.1.3 Interview method*

For this study it was important to be able to measure coping in a sensitive way, which also could take the coping context in account. As coping is usually measured with surveys, it was necessary to construct an entirely novel interview format, based on cognitive behaviour therapy (CBT). In the interviews, participants described how they appraised stressful work situations and stressful off-work situations, emotions, coping behaviour and associated consequences, at full-time and at reduced working hours.

The participants rated the frequency of the stressful situations on the scale of zero to six, where zero is ‘never’ and six is ‘every day’, used in the MBI-HSS (Maslach, Jackson, &

Leiter, 1996). The interviewed rated their perceived stress on a scale of one to nine, where one was 'very low stress' and nine was 'very high stress' (Dahlgren, Kecklund, & Åkerstedt, 2005). The interviewed described each type of stressful situation in the present, using a recent experience of the situation type that was described in detail, and described one example of the situation type a year back in time, in more general terms.

The social workers were interviewed at their workplace, and an average interview lasted one hour and 37 minutes. Once the recorded interviews had been transcribed, they were analysed using the QSR N6 software, which facilitates qualitative analysis (Edlund & McDougall, 2017). From the intervention group 12 persons were interviewed, with a mean age of 45, nine women and three men. From the control group three persons were interviewed, all women, with a mean age of 29. The interviews were also inter-rated, meaning another psychologist, with extensive experience in CBT treatment for stress, independently assessed six randomly selected interviews, four from the intervention group and two from the control group. Final interrater reliability amounted to 80 percent, which meets established qualitative criteria used in the context of health research (McKibbin & Gadd, 2004).

#### *4.3.1.4 Statistical method*

One-tailed t-test for independent groups was performed in SPSS statistics 22. Despite the gender equality perspective of the reduced working hours trial no statistical analysis using gender was performed, as there were not enough men in the sample to perform this credibly.

### **4.3.2 Results**

#### *4.3.2.1 Surveys*

Our hypothesis was that the intervention group would experience less burnout and be reactivity in stressful situations to a lesser degree, due to decreased workload and increased recovery opportunities. The intervention group did show a significantly lower level of emotional exhaustion compared to the control group ( $d = 0.9$ ), but there were no differences in the two other burnout dimensions, depersonalization and sense of accomplishment. The intervention group thus exhibited a significantly lower level of reactivity in stressful situations ( $d = 0.7$ ).

#### *4.3.2.2 Interviews*

Several types of recurring stressful work situations were described by staff; lack of time to deal with emergencies, lack of time to handle practical setbacks, lack of time to meet deadlines for written reports, encountering client aggression, problems with managerial interactions, performing difficult tasks, and managers stressing over lack of time to support staff and staff lacking time to take on new client cases. Even though the participants described using problem-focused coping behavior to deal with work stress both at full-time and in the reduced working hours, this did not resolve the stress generated by high caseload, which lead to lack of time. Reduced working hours seemed to primarily increase recovery opportunities and the exposure to work stressors, rather than resolving them. Several types of



recurring stressful home situations were described; such as lack of time to meet friends, lack of time to perform household chores, lack of time for childcare, lack of time to handle practical setbacks, and experiencing burnout symptoms. These off-work stressors were described as resolved by the extra free-time, as they were generated by lack of time and energy. Recovery opportunities during free-time were described as dramatically increased.

#### *4.3.2.3 Conclusions*

Reduced working hours seemed to have a limited impact on work stress as it lowered the duration of time employees were exposed to work stressors, yet material conditions, primarily high caseload, were not altered. The causes of off-work stress were addressed as reduced working hours reduced time-conflict and provided more recovery opportunities. It is likely that the improvements in off-work recovery helped reduced work stress. To provide more on-work recovery opportunities, caseload would probably have to be reduced.

#### **4.4 STUDY III: REDUCED WORKING HOURS AND WORK-LIFE BALANCE - A QUALITATIVE STUDY OF SWEDISH SOCIAL WORKERS PARTICIPATING IN A LONGITUDINAL TRIAL**

##### **4.4.1 Method**

The same social service agency studied in study II was also the subject of study III. In study III, the second section of the interview guide used in study II was the basis for the analysis. This section used a fully structured interview format with set questions, and lasted 20-30 minutes. Questions were asked regarding; work-life balance, work relationships, anticipatory emotions when going to work, work support, relationships with clients, worry over work, performance based self-esteem, burnout, work experience, attitude towards returning to full-time, anticipatory emotions when going home, personal relationships, private support, worry over private life. The focus was the experience of these factors before and after the reduced working hours intervention. Content analysis was chosen as qualitative data analysis method. The transcribed interviews were analysed in the Nvivo 11 software which facilitates qualitative analysis (Edlund & McDougall, 2017). Answers were condensed, creating meaning units, which in turn generated categories and themes. Manifest content was analysed rather than latent, in order to respect the social workers experiences. Theoretical interpretations were instead made of the results, based on theories of work stress.

##### *4.4.1.1 Study population*

Out of the 22 participants in the intervention group that were initially interviewed, 12 remained per protocol at the end of the trial and only their data was used to align with previous studies. The intervention group consisted of two managers, seven social workers, and three social assistants. Three of the interviewed were men and nine were women. Ages ranged from 28-62 years, with mean age being 45 years of age.

##### **4.4.2 Results**

The interviewed mostly considered their social work experience to have affected their work stress. Especially those with much experience described experience lowered work stress as they rarely encountered new stressful work situations. Those who did not were new in the profession and had not amassed any social work experience, or viewed social work as stressful in and of itself, a form of acceptance. The interviewed who felt they had performance based self-esteem were usually younger and had less experience as social workers. As for the most typical support received by colleagues, it was described as receiving help with problem-solving. Emotional venting with colleagues was described by some. However, practical support with work tasks was unusual. Managers seemed to receive little or no support at all at the workplace.

The interviewed described experiencing positive emotions in anticipation of going to work at reduced working hours, a transformation from the exhaustion and reluctance felt at full-time. Collegial relationships were described as positively changed by some. Client relationships were described as improved by most, as their own mood improved and they became more

present with clients. Worry over work had decreased for most of the interviewed. Those who felt their worry had not changed as a result of reduced working hours tended to describe themselves as persons who didn't worry needlessly. Recurring burnout symptoms, or being near to burnout, had been experienced by several social workers, as well as sick-leave in one instance. Most perceived the risk for burnout to be lower during reduced working hours, compared to full-time. The interviewed were all concerned about the consequences of returning to full-time work.

The interviewed for the most part described using private relationships to get informal social support to deal with work-related stress, predominantly from friends, although seeking support from partners was common, whereas parental support was rarely sought.

The interviewed mostly described experiencing positive emotions in anticipation of coming home at reduced working hours. Most parents described having more time to spend with children, that they could include children more in chores, and vary their children's activities more. Romantic relationships were mostly perceived to influence stress, primarily reducing it and offering emotional support, as well as help with solving problems, although romantic partners rarely helped by overtaking private chores, or other off-work obligations. Being in a relationship was also described by several as being stressful, in terms of demands placed on them, and a relationship in crisis was a stressor. However, single life was described as stressful, lonely and financially straining. The interviewed who were in romantic relationships described these as improved due to the relationships being strengthened by performing enjoyable and spontaneous activities in a different way compared to full-time. The interviewed for the most part dedicated more time to friends, which was perceived as elevating mood, although some felt their friendships had not been affected, as they had a fixed rate for social interaction, with which they were pleased. For several, reducing working hours made it possible enabled them to meet family more often, which made family ties stronger, and helped reduce guilt over not having had time to meet them. If family relationships remained unaffected, this was because family lived remotely, or to participants having family relationships that were very fixed. When the interviewed were asked how they spent their extra two hours of free-time, a variety of activities were described although some were more frequent. Exercise was described by several as a way of improving general well-being and to interact socially. Spending time with friends was described by several of the interviewed. Initiating or pursuing hobbies, and performing household chores, was described by some. Parents describe taking the time to make everyday activities and routines with children more playful. Worry over private life was described by most as lower, including worry over burnout symptoms leading to burnout. Those who experienced no change in worry felt that they were not as individuals prone to worry, regardless of circumstances.

#### **4.4.3 Conclusions**

The interviewed described that reduced working hours altered their work-life balance in a positive way. The improvement was described as experiencing improved mood. It is likely that the interviewed had more control over the demands posed by their private life, which in

turn made for better recovery in terms of quantity, quality and diversity of recovery strategies. The results as a whole make it possible to sketch a tentative process for how a positive work-life balance is established, and maintained. The described positive changes in emotions should not be taken lightly, as they were described as having positive consequences for both the risk of being subject to burnout and for the quality of client care.

## **4.5 STUDY IV: THE IMPACT OF REDUCED WORKTIME ON SLEEP AND PERCEIVED STRESS – A GROUP RANDOMIZED INTERVENTION STUDY USING DIARY DATA**

### **4.5.1 Method**

Like study I, this study used survey data from the main reduced work hours trial, and thus had the same design, procedure and data collection, but was based on all 33 workplaces from all the four occupational sectors.

#### *4.5.1.1 Participants*

Workplaces were randomized to the intervention or control condition, however, one workplace was not able to participate in its allocated intervention condition and thus switched to the control condition. 919 employees were to participate in the trial, out of which 98 quit after randomization had been performed. Out of the remaining sample, 580 were per protocol and were included, 354 in the intervention group and 226 in the control group. 152 came from eight workplaces in the social services, 214 came from nine workplaces in the technical services, 143 came from 11 workplaces in care and welfare, and 70 from five workplaces in call centers. 76 percent were women, age ranged from 20-65 years (mean age was 44.6 years). Half had children at home. 29 percent were shift workers. Differences between groups in gender, educational level, children living at home, work area, shift work were tested with Chi2 tests, whereas age, work control and work demands were tested with T-tests. The only differences found were in shift-workers ( $P=0.000$ ), educational level ( $P=0.002$ ) and job control ( $P=0.037$ ), which were then included in statistical models as covariates. 62 participants did not answer at follow ups after baseline data collection, of which 19 were in the intervention group and 43 in the control group. The differences found in the attrition analysis showed that completers slept 18 minutes less on weekdays ( $t=2.48$ ,  $P=0.013$ ), that men were more likely to drop out than women ( $t=2.53$ ,  $P=0.012$ ), and that non-completers were somewhat younger than completers ( $t=-2.75$ ,  $P=0.006$ ).

#### *4.5.1.2 Measures*

The Karolinska Sleep Diary (Åkerstedt, Hume, Minors, & Waterhouse, 1994a, 1994b) was answered by survey respondents for seven consecutive days, questions concerned time of going to bed, time of awakening, sleep latency, worry and stress at bedtime, an index for sleep quality based on four items (Cronbach's alpha .76-82 for workdays and .75-79 on days off).

A "wake diary" was also filled in by survey respondents, where they noted the start and end of their workday, measured sleepiness and stress six times during the day (at 07:00, 10:00, 13:00, 16:00, 19:00, 22:00 hours), both on a scale of one to nine, where one represented the lowest level.

#### 4.5.1.3 Data analysis method

Mean values were computed for the outcome variables. Intra class correlation of workplace was calculated at baseline for all variables and, though low (0.005-0.065), were subject to sensitivity analysis. Multilevel mixed models were used, that included random effects for workplace at level 2. The model included the outcome variable, the fixed effects of group as a between-group factor (intervention/control, on level two) and time as a within-group factor, (baseline, nine and 18 months, all on level one) and the interaction between group and time. Autocorrelation was used to fit the model. Subgroup analysis was performed of gender (by adding it as a second between group factor), age, having children living at home, baseline sleep quality and worries and stress at bedtime. Significance testing was performed using a two-tailed alpha of 0.05, effect size was calculated with Cohen's  $f^2$ , with boundary values of 0.02 (small), 0.15 (medium) and 0.35 (large).

#### 4.5.2 Results

The intervention group had reduced working hours by one hour and forty minutes per day including breaks, the control group reduced their work hours with eight minutes per day, there was thus a significant group $\times$ time interaction ( $F=59.88$ ,  $P<0.0001$ ,  $f^2=0.17$ ). Working five days on average per week was in intervention and control group, although the intervention groups decreased their number of worked days over time more ( $F=6.44$ ;  $P=0.002$ ;  $f^2=0.01$ ).

There was no difference between groups in subjective sleep quality, sleepiness or perceived stress at baseline, analysed using t-test ( $P=0.055<0.905$ ).

In the intervention group subjective sleep quality improved, sleep duration, calculated as an average over the trial period, increased by 23 minutes, and their sleepiness, perceived stress, worry and stress at bedtime decreased on workdays. The effect size, Cohen's  $f^2$ , ranged between 0.03 and 0.08 on workdays. Subjective sleep quality also improved on days off, and sleepiness, perceived stress, worry and stress at bedtime was reduced. Sleep duration was not affected on days off. The effect size ranged between 0.03 and 0.04. Internal response rates in the diary data ranged between 73 percent and 93 percent. None of the covariates age, educational level, and job control level at baseline altered results when they were added to the unadjusted model. There was no significant three-way interactions when subjective sleepiness and perceived stress at six different times during the day was analysed.

When subgroups were analysed, it was found that in women sleepiness improved somewhat, and that employees with poorer sleep quality at baseline felt less worry and stress at bedtime on days off as a result of reduced working hours, regardless of gender. There were no subgroup effects for older employees or employees with children at home, nor did stress and worry at bedtime at baseline affect the effects of reduced working hours.

### **4.5.3 Conclusions**

Reduced working hours by 25 percent, with retained full-time salary, can reduce stress and sleepiness, increase sleep duration and improve the quality of sleep, which may contribute to life satisfaction, daily functioning and health development.

## **4.6 STUDY V: TOTAL WORKLOAD AND RECOVERY IN RELATION TO WORKTIME REDUCTION: A RANDOMISED CONTROLLED INTERVENTION STUDY WITH TIME-USE DATA**

### **4.6.1 Method**

Like study I, this study used survey data from the main reduced working hours trial, and thus had the same design, procedure and data collection, but was based on all 33 workplaces from all the four occupational sectors.

#### *4.6.1.1 Study sample*

There were 33 workplaces in the trial, altogether 919 employees, of which 98 dropped out after randomization had been performed. In the end 636 employees remained per protocol, 270 in the intervention group and 266 in the control group, 170 in the social services, 236 in the technical services, 159 in care and welfare, and 71 in call centers. 77 percent were women in the intervention group and 72 percent were women in the control group. Age ranged from 20 to 65 years, and the average age was 44.2. 75 percent lived with partners, 48 percent had children living at home, and 5 percent lived as single parents with children. Educational level for the intervention group was distributed as follows: elementary school 10 percent, upper secondary school 46 percent, university courses 9 percent, university degree 36 percent. Educational level for the control group was distributed as follows: elementary school 16 percent, upper secondary school 49 percent, university courses 6 percent, university degree 27 percent. Close to one-third of all employees were shift workers. Sensitivity analysis showed that at the end of the trial eight employees were found to have worked four day weeks, and thus had not reduced their daily work hours, and were excluded.

When groups were compared concerning differences at baseline using t-tests, no differences were found between groups in; gender, age, having children at home, sharing the household with another person, living alone with children, job demand, job control, hours of paid work, non-paid work. However, the intervention group spent more time on recovery on days off. Differences were also found between groups at baseline for, using X<sup>2</sup> tests, in having a university education and working shifts, these were then used as covariates in the models.

#### *4.6.1.2 Measurements and outcomes*

Statistics Sweden has developed a methodology for recording time-use, which was modified for use in this study. Participants recorded activities in 30 minute intervals during the day (06:00 to 01:00 the following day) for seven consecutive days, choosing from these activities; work, work performed at home, household work, care of own children, care of others, personal care, meals, sleep, rest, leisure time, social activities, own time and "other" (data from this activity category was not used). Recorded sleep during 08:30 and 21:30 was categorized as 'daytime sleep'. From these categories four main activity groups were formed; paid work, non-paid work, total workload (paid and non-paid work) and recovery activities (personal care, meals, rest, leisure time, social activities, daytime sleep). If 25 percent of data was missing and was denoted as "missing", nor were days of sickness absence included.



Average rate of internal missing was 5.4 percent at baseline, 3 percent at 9-month follow-up and 2.9 percent at the 18-month follow-up.

#### *4.6.1.3 Data analysis method*

Mean values were computed, using multilevel modelling, for time-use data. Intra class correlations were calculated at baseline for all variable. Though low, 0.000 – 0.130 for workday activities and 0.000-0.023 for activities on days off, they were taken into account in the multilevel mixed models analyses, with random effects for workplace at level 2. Outcome variable, the fixed effects of group, a between-group factor (intervention/control, on level two), time, a within group factor (baseline, nine months and 18 months, on level two), and group and time interaction was included in the model. Autocorrelation was used to fit the models, adjusted by educational level and shift work, residuals for workdays were calculated (from -0.238 to 0.228) and for days off (-0.011 to 0.245). To examine the effects by time period, i.e. baseline, follow up after nine months, and follow up after 18 months, group was used to calculate contrast coefficients. The participants who worked four days a week instead of reducing daily work hours were excluded for a sensitivity analysis, and the workplace that was not randomized was also subject to sensitivity analysis. Subgroup analysis was performed of gender (by adding it as a second between group factor), age, having children living at home, living with a partner, living alone with children, work area and shift work. Significance testing was performed using a two-tailed alpha of 0.05, effect size was calculated with Cohen's  $f^2$ , with boundary values of 0.02 (small), 0.15 (medium) and .35 (large). Significance testing was performed using alpha at 0.01, to avoid type one errors.

#### **4.6.2 Results**

In comparison with the control group, the intervention group significantly increased the time they used for own-time activities and domestic work, their total workload was also comparably lower on workdays, and on workdays their recovery activities increased. Similar results was generated by the adjusted model. The intervention group increased the time they used for free-time activities on days off compared to the control group, but in the adjusted model this was no longer significant. When a sensitivity analysis including the eight employees who worked four day weeks rather than reducing daily work hours was performed, results were similar. There was no effect of adding gender as a between-group factor, nor of adding having children living at home. When sharing household with partner was added there was an effect on the amount of paid work on days off, but not in the adjusted model. Living alone with children had no effect, nor did working area or shift work.

#### **4.6.3 Conclusions**

Reduced working hours reduced both paid and non-paid work, and during workweeks the extra free-time was used for recovery activities and domestic tasks. The reduction of total workload and increase in recovery activities might be one of the reasons reduced working hours was previously found to reduce sleep, sleepiness, stress and worries at bedtime in the same sample.

## 5 DISCUSSION

### 5.1 MAIN FINDINGS

Improvements in stress were noted in all studies where it was examined (I, II, III and IV). Improvements in sleep and sleep habits were also noted in all studies ( I, II, III and IV). Although expected, it is important that these results were sufficiently evidenced, given their well-established importance to psychosocial health. Improvements in work-life balance were also noted in all studies that examined it (I, II, III and V). As work-life balance is a major stressor (Leineweber, Baltzer, Magnusson Hanson, & Westerlund, 2012), this is important.

When the effects of reduced working hours on social workers were studied in study I, several symptoms of Exhaustion syndrome from both criterion A (physical and psychological exhaustion) and criterion C (concentration and memory difficulties, emotional instability, irritability, somatic weakness and being easily fatigued) were found to be improved. The diary measures showed positive effects for social workers on workdays and weekends on restorative sleep, stress, memory difficulties, negative emotion, sleepiness, fatigue and exhaustion, and improved sleep quality on weekends. Improvements in demands, instrumental manager support and work intrusion on private life were also found. The positive effect on work intrusion on private life, and the lack of effect on private life intrusion on work, remained significant after being controlled in a model where children living at home were also included as a confounder. When all occupational sectors participating in the trial were examined in study IV, similar positive effects were found for stress and sleepiness. Lower mean daytime stress and sleepiness was found both during workdays, and on days off. Sleep and sleep-related aspects also improved, and sleep duration increased during weekdays. On workdays worries and stress at bedtime were lower, sleep duration longer and subjective sleep quality better. The same was true on weekends, except for sleep duration, which was not longer in the intervention group compared to the control group. Overall, as in study I, having children at home made no difference, nor did being a women or being an older trial participant.

Burnout symptoms, specifically emotional exhaustion, were found to be reduced in study II, which examined one of the social work agencies, and reactivity in stressful situations was also reduced. Stressful work situations were described that involved client emergencies, aggression from clients, meeting report deadlines, practical setbacks, stressful interactions with managers, and managerial stress. These were described as emanating from lack of time due to high caseload, and seemed to have improved primarily due to being less frequent at six hours, as the social workers less exposed to work stress, and had the possibility to expand and improve off-work recovery. Coping behavior was also analysed, and the social workers at the agency primarily described effective and problem-focused coping behaviour at work, both before and after reduced working hours. Previously stressful situations during free-time concerned not having sufficient time and energy to meet friends, lack of time to perform

household chores, lack of time to rest, lack of time for exercise and for childcare, and either strongly improved or were no longer stressful at all.

When the social workers described their experiences of work-life balance in study III, an emotional daily transformation was described. All felt more positive emotions towards their workplace in the mornings, several perceived collegial relationships to be improved, and most that client relationships also improved, several worried less over work, and most felt that the risk of burnout was lower. Most felt more positive when going home after work, most parents felt their relationships with their children improved, and all those in romantic relationships described them as improved. Several described experiencing less worry concerning their private life. All participants described having more time for recovery activities of various kinds, in particular spending more time on friendships, and several also spent more time with their siblings and parents. When time-use was studied quantitatively in study V in all the four public sectors participating it was found that the intervention group did indeed spend more of their time than the control group on domestic work and recovery activities on workdays, and also more of their time on free-time activities on days off.

## **5.2 ON RECOVERY AND SLEEP**

On-work recovery was not measured per se in this thesis. However, the qualitative material in study II and III does not suggest that on-work recovery, such as taking breaks, was affected by reduced working hours, nor would it be expected to, given that workload was not reduced for the remaining six hours. There was, however, ample time for recovery after work, an aspect which was extensively studied. Study V showed that all trial participants who reduced their working hours, regardless public sector, spent more time on domestic work during workdays, as well as on recovery activities, and more time on free-time activities on their days off. It is logical that social workers would not differ in their off-work time use, as they are embedded in the same social context (Swedish culture) as the other groups, conversely this means that other sectors should not differ from social workers in this aspect. The free-time use pattern identified in study V is fully compatible with what was described in study II and III. Increased control over off-work recovery was evident when recovery was described and discussed. A variety of both new and tried and tested recovery activities were usually described, which chosen depended on mood and need. The consequences of the recovery activity seemed to be more important than its form in study II, this shows that it is not easy to pinpoint what exactly constitutes recovery at any given time, a seemingly small change in an activity could transform its consequence and meaning for the individual. Taking care of children might for example be considered a recovery activity, rather than a chore, judging by study III. Parents also had more time to include children in chores, such as cooking, which then became mutually rewarding social interactions of learning, play and productivity.

Next door to our perception of needing daily rest to counteract work stress is the pervasive notion of the importance of sleep, which is, as mentioned previously, a vital part of recovery. The qualitative material in study II suggests that at full-time there was a time conflict between rest and social interaction, which the extra free-time resolved. Study IV also showed

that participants in all sectors extended their daily sleep duration during weekdays, when reduced working hours made this possible. This is important, as adequate sleep is necessary for maintaining an optimally functioning brain (Ma, Dingens, Basner, & Rao, 2015). That there was no difference between the intervention group and the control group in sleep length on weekends may be because employees typically use weekends to sleep longer, in an attempt to recover from the workweek. Extended sleep duration on workdays may explain why daily sleepiness and fatigue was reduced in study I and IV, but may also be explained by the daily reduction of stress, as stress induces sleepiness and fatigue on a day to day basis (Akerstedt, Axelsson, Lekander, Orsini, & Kecklund, 2014). The improvements found in sleep quality similarly support this, as there is a strong connection between sleep quality, work-related stress, fatigue and worry (Kompier, Taris, & van Veldhoven, 2012).

### **5.3 A THEORETICAL MODEL OF REDUCED WORKING HOURS**

Reduced working hours as an intervention can be understood as having initiated a positive psychosocial process that aligns with several major theories of work stress, and helped participants establish a positive work-life balance. Control over private life stressors likely increased due to the extra free-time, which made it possible to cope with private demands, improve and increase off-work recovery ( such as sleeping longer), and receive more informal social support from partners and friends. Sleep quality improved both in study I (of social workers) and in study IV (with all participating sectors included), which showed that not only daily sleep duration increased but also the yields it returned. This suggests that sleep quality was an effect of the process as a whole, particularly of reduced allostatic load. Psychological detachment from work through recovery is also a protective factor against emotional exhaustion (Sonnentag, Binnewies, & Mojza, 2010). Thus a theoretically founded, and empirically based, process of reduced exposure to work stress, reduced allostatic load, increased control over private demands, improved recovery, informal social support, improved work-life balance, recovery, mood and sleep may have reversed the daily wear and tear described at full-time. Any loss spiral (Demerouti et al., 2004) in effect was interrupted. Figure 1 illustrates this proposed preventive process.

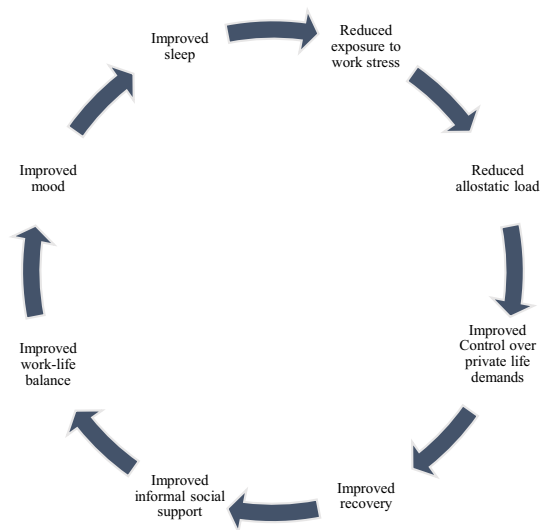


Fig 1. A theoretical model of reduced working hours.

#### 5.4 A NOTE ON GENDER

Study IV and V analysed gender differences on a statistical level. Study IV found no differences in stress and sleep, and study V found no effects of gender regarding amount of paid work, non-paid work, total workload or recovery activities. Due to the small number of men in the social worker sample in study I, II and III, differences between men and women could not be analysed, although results in study I were controlled for gender and age. That women dominated the sample reflects the gender composition of the Swedish social workforce, yet this also made it difficult to analyse gender. Gender in this study thus has to be considered from a larger, societal perspective. The public sector employs women to a large extent, salaries remain non-competitive and load high, conditions which may also affect men. As for social workers, the Swedish Work Environment Authority has reported that among social workers in Sweden, women are more likely to experience work-related psychosocial problems than men (Arbetsmiljöverket, 2012). This is also generally the case when work-related complaints are compared between women and men (Arbetsmiljöverket, 2018). Thus improvements in work conditions improve the situation of women on the occupational level, but may not affect gender equality between individuals in these professions.

#### 5.5 HOW DID REDUCED WORKING HOURS INTERACT WITH THE SOCIAL WORK CONTEXT?

One focus in this thesis was to examine how social workers responded to a reduced working hours intervention. Apart from aligning with major work stress theories, reduced working hours also aligns with what is known about social workers and burnout risk. Several individual and organizational factors associated with increased resilience in social workers were described by the interviewed social workers in study III; having an important life outside of work, receiving support from others, experiencing pleasure derived from helping

others, having a reasonable total workload and experiencing a positive organizational climate (McFadden et al., 2015). A central observation made in study II and III is that stress was that work stress seemed to be considered an inevitable part of social work. This culture of stress was named and described by social work researchers early on in 1996 (Thompson et al., 1996). In Sweden, lack of time has also recently been suggested to have become similarly normalized in social work (Olsson & Sundh, 2018). Work was in effect perceived as a health threat by many of the interviewed, who feared both long and short term effects of work stress.

That work demands were reduced in the intervention group in the social worker cohort in study I indicates an improvement in the balance of the demand, control and support dimensions that have previously been identified as central for stress (Johnson & Hall, 1988; Karasek & Theorell, 1990), which may explain part of the reduction in work stress. That control did not differ between groups is not surprising, as actual decision latitude was not altered for the social workers. There was no improvement in social support at work, nor instrumental support from co-workers, despite some social workers reporting improved social support in the qualitative data material. However, on closer examination of this data, this mostly described improved social ambience, rather than co-workers supporting each other. Reduced working hours actually provided less time for helping co-workers, meaning that a negative effect would actually have been more expected. The lack of improvement in this area is thus not surprising. The difference between groups in instrumental manager support was due to the control group reporting it as having decreased over time, not that the intervention group received more instrumental support per se. The qualitative material in study II suggests that managers were stressed by not being able to provide enough support to their staff, and by the knowledge that they were giving them too many cases. The wear and tear of work stress might affect managers' ability to perform their work, just like the social workers described. Reduced working hours might have impeded a negative spiral of negative emotions that could impact social worker and manager relations, but time for supervision would most likely have to be allotted and expanded to positively change this dimension.

As previously mentioned, daily recovery counteracts work stress (Geurts & Sonnentag, 2006). Emotional exhaustion among social workers has been found to increase with long working hours and higher demands, and in contrast, detachment from work stress during free-time counteracts has been found to reduce work stress (Sonnentag et al., 2010). The extra free-time was described as having had the effect of resolving off-work stressors linked to lack of time, but also provided an arena for more off-work recovery, a broader spectrum of possible recovery strategies, and the freedom to organize free-time obligations like chores so they could be aligned with daily recovery need. That recovery patterns differed between weekdays and weekends in study V supports that recovery strategies were used with agency, drawing from the resources of the participants themselves. As such reduced working hours may have had a pre-therapeutic effect, i.e. it made sufficient recovery possible, without need for tertiary post-burnout CBT intervention. The lower exposure to work stress in social work, reducing allostatic load, may also have lowered the need for recovery at the end of the workday per se.

### **5.5.1 If the central stressor in social work is high caseload, is reduced working hours the solution?**

High caseload, and the time conflicts it generated, was the central stressor described in study II, at the root of most stressful work situations, such as dealing with client emergencies, lacking time to handle practical setbacks, and meeting report deadlines. It intensified work needlessly and seemed to make social workers less present and flexible with clients. This was described particularly in stressful situations with clients who were aggressive, or became aggressive when their social workers did not have time to respond to calls or meet them within a reasonable time frame. Aggression and abuse from clients are related to increased burnout in social workers (Savaya, 2012), thus high caseload is not only a risk for the quality of client care, but also for social workers. It is important to not conflate difficulty of client situation with high caseload. Social workers seemed to enjoy working with “difficult” clients, it was their actual working conditions which seemed to be the problem; not social work.

A possible vicious circle, with social workers at full-time becoming more and more pressured and in need of more and more manager support, whilst managers became more and more stressed and less and less capable of providing support, in an emotionally highly charged work environment, was suggested. Study I showed that instrumental managerial support decreased in the control group over time, and study II that high caseload was also a stressor for managers, who strived to be able to have time to support social workers, whom they also feared burdening with more cases. This dynamic may have far-reaching consequences, as supportive supervision reduces burnout among social workers (Siebert, 2006). It was also evident that not only the social workers, but also their mid-level managers, were powerless to affect workload. The managers' only option being to hire social-work consultants not immersed in the organization, thus risking lower quality and poor care coherence. High caseload also likely made on-work recovery difficult. From the theoretical lens of the demand, control and support paradigm, as well as recovery, high caseload is a malignant working condition. A recent report based on national inspections of social work offices made by the Swedish Work Environment Authority also confirms that the number one demand aspect of social work in Sweden is a high and growing caseload, with cases growing more and more complex whilst lack of time has increased, which places high demands on social workers to make life-altering decisions, as well as meeting demanding, and sometimes aggressive clients (Arbetsmiljöverket, 2018). Despite decades of work stress Swedish social work organizations, or the political bodies that allocate their funding, have yet to address this in a systematic manner.

### **5.5.2 The meaning of emotions in social work**

It is easy to disregard the reduction of negative emotions found in study I and the transformation of negative emotions into positive emotions, described in study II and III, and forget that negative emotions are core symptoms of both exhaustion syndrome and burnout. This speaks to the efficacy of reduced working hours as a preventive intervention. However, emotions also seemed connected to the actual practice of social work. In study II and III the

social workers described being able to be more patient with aggressive clients, as well as being more present with clients in general, an indication that emotion work improved. Emotion work is the ability of workers to display emotions towards clients that are required by their organizations, such as being sensitive to clients' needs, despite of client behavior, and being able to accept the disparity between actual feelings and displayed feelings (Zapf & Holz, 2006). This emotional dissonance is, however, stressful (Zapf & Holz, 2006). After work hours were reduced the social workers seemed to have more energy to perform emotion work, and improved mood may have reduced emotional dissonance, as their feelings towards clients were more aligned with what they were projecting. This might be a protective factor, as organizational problems can, when combined with demands that employees perform emotion work, lead to burnout (Zapf, 2002).

### **5.5.3 Did social work experience make reduced working hours redundant?**

One could argue that work experience should offset reduced work hours, and that primarily unexperienced social workers suffers from work stress. Different types of work experience were described in the qualitative studies in this thesis.

One type could be described as situational experience, where experienced social workers had encountered most stressful work situations previously, and thus did not suffer the stress of the unexpected or the uncertainty of deciding which course of action to take. However, although more experienced social workers did benefit from this, several still described that social work had worn them and left them vulnerable to burnout. This may be because work experience could not erase the daily emotional impact of social work, or stressful work situations due to time conflicts which lead to a constant need for re-organizing, which is stressful regardless of work experience. The second type of work experience noted was learning how to separate the act of social work from the ultimate outcome for clients, i.e. learning not to base self-esteem on the outcomes in various client situations and processes.

The third type could be described as a subtle form of the burnout dimension depersonalization. It involved learning to adapt to problematic working conditions, such as accepting that continuity of care was disrupted by cancellations, which could lead to negative outcomes for families and children. Although described as a form of acceptance, this in effect seemed to transfer the responsibility to clients in an unrealistic way. Similar tendencies have previously been observed in a Swedish study, which noted that overburdened social workers could rationalize and idealize stress-reducing strategies that meant reducing quality of care, by painting this as the responsibility of clients, rather than to contextual factors (Astvik et al., 2014). This study did not suggest that working full-time with an unbalanced workload was offset by work experience, but empirically the role of experience in social work would need to be clarified further in studies that can account for years worked, other relevant aspects of experience, and contextual factors such as workload.



#### **5.5.4 Would reduced working hours be a cost effective solution to work stress in social work?**

If individual caseload could be reduced by hiring more social workers, this might be a strong argument for hiring more social workers in order to reduce work stress, although this remains an empirical matter. The risk may be that caseload would not be reduced, but more cases from waiting lists just added on. Reduced working hours implemented in the fashion of this trial would cost, in essence a six hour workday with reduced workload entails raising employees monthly salaries in terms of compensation per hour worked. But the many negative consequences of work stress in social work that have been reported, like turnover, sick-leave and affected client service, are also costly. Reduced working hours may make social work more attractive. It may also increase longevity in social work, which has an economical dimension, besides the human cost. It could be that newly examined social workers find positions more easily in low-income areas where there is a high turnover of social workers, which experienced social workers may avoid. This then risks placing them in a work environment that cannot afford to provide the learning curve needed in order to transition from the abstract milieu of education to the actual practice of social work.

#### **5.5.5 Coping in social work and reduced working hours**

Coping was studied in order to clarify to what extent work stress in social work could be considered an individual issue, i.e. if ineffective types of coping created work stress? Avoidant coping, i.e. not confronting stressors, has been found to increase work stress among social workers (Anderson, 2000). There was no indication of this, as the coping behavior described in study II was primarily problem-focused, which is associated with lower burnout symptoms (Anderson, 2000). Instead the social workers tended to describe their coping ability as improved, possibly because they experienced more positive emotions when performing social work, and had the energy to persist in the use of adaptive coping to a larger extent, as when dealing with client aggression. Off-work coping behavior at full-time failed to resolve stress over the lack of time available for chores, social obligations and varied recovery.

A common coping strategy off-work seemed to be to do only that which was absolutely necessary and thus not meeting friends or resting, leading to loss of social support and possibly retained allostatic load. This is not surprising, as there was little possibility for the social workers to reduce workload at work. The problem was that any coping choice at full-time had its own cost. Not meeting friends in order to rest meant losing social support, meeting friends meant to lose rest. Using effective coping, yet experiencing diminishing emotional returns sets the stage for burnout, or the type of depression where a person remains active out or perceived duty, yet experiences no positive emotions (Martell, Addis, & Jacobson, 2001).

In contrast, after reduced working hours the social workers were free to employ whatever free-time coping they needed, i.e. resting, interacting socially, and performing chores according to daily needs and wants. In effect reduced working hours seemed to utilize the recovery competence that the social workers already inherently had, and were free to use,

increasing the quality and quantity of their positively reinforced interactions with the environment, which is one of the goals of CBT treatment for depression (Lewinson, Sullivan, & Grosscup, 1980). The stressors of the working day seemed to be reappraised as manageable after reduced working hours, which is a main aspect of coping (Lazarus, 1993b). An intervention on the structural level thus seemed to transform individual reactions and behavior. It is unlikely that attempting the reverse would achieve this, i.e. to modify structural effects through individual interventions.

## **5.6 METHODOLOGICAL ISSUES**

A general limitation of the reduced working hours trial that applies to all studies in this thesis, but mainly affects studies I, IV and V, was that there was no follow-up after participants had returned to full-time, which would otherwise have provided important information. The main reason is that the research group thought it important to maintain the reduced working hours period for as long as possible, in order to be able to say as much as possible about long-term effects. This is off-set primarily by the longitudinal design of the trial, and the possibility to actually reduce workload fully. A possible limitation common for studies I-V is that all data was collected 14 years ago, but the major changes to welfare policies affecting the public sector and social work were made before 2006. Unfortunately, the same problems with working conditions remain, seemingly worsened, which makes the material still relevant.

As study II was conceptualized after the trial had begun, only cross-sectional survey data could be collected in it. Another limitation of study II is that retrospective interview data may be subject to memory effects. However, one of the authors had previously researched this, and had empirically found that individuals can reliably compare psychosocial work conditions over time spans much longer than that of this trial, if a structured interview format and a time ruler is used (Bildt Thorbjörnsson, Michélsen, & Kilbom, 1999). Thus study II was designed with this in mind. A structured interview guide was used, and a time line in the form of participants being asked about stressful situations before reduced working hours in May 2005. It may be argued that it is not possible to generalize the findings in this study, as they are based on qualitative method, which is reasonable. However, in qualitative research the concept of transferability is more relevant to consider. One school of thought conceptualizes transferability as a type of generalization through context similarity, which focuses on the context studied and its similarity to other contexts, which presupposes that contexts are known (Larsson, 2009). This applies to study II, and means that the best judges of the transferability of the findings concerning stressful situations in social work would be social workers immersed in social work contexts. Although individual workplaces may have more or less the same type of high caseload, it is likely that the dynamics involved are transferable.

Qualitative data was also used in study III, which can not draw any conclusions regarding causality. This was partially off-set by the results of study I, II, IV and V, which support several aspects of the described experiences of reduced working hours. But this must also be understood as a condition for this data, rather than a limitation. At the time the study was designed there were no realistic alternatives, as more extensive surveys would have been too

much of a burden for the participants, who already had extensive surveys to answer. There was a lack of negative experiences in this study, which is not surprising, given that reduced working hours did not lower salary or increase workload. However, aspects of their experiences remained unaffected by reduced working hours, this indicates that the qualitative data was not created in the hope of prolonging the intervention. Subjective diary measures were used in both study I, IV and V which could mean that there is a similar risk for positive bias from participants, but the diary instruments have been used in previous studies in a reliable way (Kecklund, Dahlgren, & Åkerstedt, 2002; Åkerstedt et al., 1994a, 1994b).

In study V, the recorded time-use data may not be as precise as could be wished, as participants were instructed to record their main activity for 30 minute periods, which means other activities may have gone unregistered. Measuring behavior this way, without an analysis of the coping context has some limitations from a CBT perspective, as the consequences of a given behavior can vary over time from day to day, or between individuals. However, that there were statistically significant changes in broad recovery patterns between groups make it possible to assume that the consequences of the behavior may have been similar for the majority of the participants.

Equally true for studies I-V is that the retained full-time salary makes it hard to know what effects an intervention with reduced workload and reduced pay would have had. It is likely that many participants would refused participation if pay was reduced, or that primarily social workers with burnout symptoms would have participated, biasing the intervention. However, the financial stress that might have ensued for participants might have made it difficult to ascertain the health effects of the intervention.

## **5.7 DIRECTIONS FOR FUTURE RESEARCH**

The results of study II and III strongly imply that excessive caseload may have become normalized in parts of the Swedish social services, that experiencing continuous stress due to caseload was expected, and not to being able to cope meant not being a good social worker. Although workload was reduced by 25 percent in the trial, its design did not account for the type of unreasonable caseloads described. Any future designs for experimental longitudinal intervention studies of reduced working hours in the Swedish social services should therefore include a reduced caseload condition. For this to be possible both the process and content of practical social work would need to be analysed in detail, in terms of breaking down typical tasks in their components, and establishing a realistic time frame to perform them, It would also be necessary to include margins for dealing with emergencies in this type of analysis, and not base it on wishful thinking, in terms of a streamlined, idyllic process. In nursing, the relationship between staffing levels and care have been explored to a much larger degree. A large study of Swedish registered nurses found that the level of registered nurse staffing significantly predicted care left undone, the most common care not performed was comforting and talking to patients, and not developing or updating care plans (Ball et al., 2016). Research assessing staffing levels in relationship to quality of care in social work and worker health would be a first step in this direction, and potentially relevant for all sectors.

There are also interesting questions regarding how the effects of reduced working hours on work stress could be measured more inclusively in further research. Previous research has suggested that work pace and working hours need to be measured separately in order to accurately measure workload (Kristensen, Bjorner, Christensen, & Borg, 2004). As such, work pace might be important to consider in future studies of stress, as it makes on-work recovery more difficult. This might be of interest in all public sectors.

A novel interview format was constructed for study II, specifically based on principles used in CBT to collect data regarding coping in a context sensitive manner. This generated a wealth of information, but was not quantifiable. It may be possible to expand on this format and use it in survey form in future studies, in order to be able to draw wider conclusions.

Due to the low number of men employed at the social service agency studied, both study II and III suffered from the difficulty of not being able to perform an analysis of gender aspects. As this dominance mirrors the gender imbalance in the Swedish social service sector as a whole, this should be considered in the future in qualitative studies of reduced working hours in the Swedish social services. The design could have counteracted this by either by using another design for the mixed study, such as recruiting interview subjects from more than one agency, in order to achieve a more balanced sample in terms of gender. As all public sectors in the trial, except for technological services, had a workforce composed primarily of women, strategies for gender balanced trial recruitment likely need to be considered overall.

Data from mid-level managers in study II concerning their attempt to manage staff stress, and the lack of response their own managers showed to their own concerns for staff, suggest that the role of managers in social work should be explored beyond that of providing social support. There may be an emotional distancing effect at each hierarchal level, depending on how managers perceive the goal of their role in relation to work stress. Does it mean to help others accept it, to distance themselves from it, or to disregard it as organizational noise needed to meet production quotas? Future studies might focus more on managers.

Finally, if possible, a qualitative follow-up of the participants in the trial in the social services could be performed now, in order to ascertain their experiences of returning to full-time work, and their own strategies and choices in relation to work-life balance after this.

## **6 CONCLUDING REMARKS**

Reduced working hours most likely had similar beneficial effects on reduced exposure to work stress and improved off-work recovery in all four participating public sectors, which may account for the positive effects found on stress, sleep and work-life balance. As the intervention is strongly theoretically supported by several relevant established stress theories, this overall effect is fully plausible. The study of work stress in social work showed that the central recurring stressor of high caseload was not really addressed by reduced working hours, except indirectly, as eight overburdened work hours were reduced to six overburdened work hours. Despite this indirect effect, reduced working hours seemed as a whole to act as a preventive intervention protective against work stress and burnout in social workers. Implications for social workers and clients seemed beneficial. Reduced caseload would likely affect on-work recovery, but not offer the same recovery opportunities. Reduced working hours may be especially suitable for caring professions such as social work where daily emotional work is required, and longevity.

## **7 ACKNOWLEDGEMENTS**

I have been truly privileged in terms of supervisors. Thanks to Carina Hellgren, main supervisor, for introducing me to psychological work-life research, for sharing an exceptionally wide expertise in the social sciences, for guidance, and for creative openness. Thanks to Åsa Nilsson, co-supervisor, for outstanding knowledge of CBT. Thanks to Torbjörn Åkerstedt, co-supervisor, for generously teaching me invaluable research skills.

Thanks to Giorgio Grossi, mentor for my PhD studies, for marvellous mentorship. Thanks to Mats Nyfjäll for providing expert statistical knowledge for the articles on social workers. Thanks to Ata Ghaderi and Mirjam Ekstedt, for input in the first phase of this work.

Thanks to Liselotte Maurex, one-time fellow doctoral student, for becoming a true friend. Thanks to Fredrik Augustsson, Fredrik Hertzberg and Jens Högström for providing academic companionship throughout this process.

Thanks to my Johanna and our daughter Flor.

Thanks to my mother Maria, my father Moises, my family and my friends.

Thanks to all the trial participants in the original reduced working hours trial, in particular the social workers who allowed me to interview them about their professional and private lives, and to my previous colleagues at the National Institute for Working life.

## 7.1 REFERENCES

- Akerstedt, T., Axelsson, J., Lekander, M., Orsini, N., & Kecklund, G. (2014). Do sleep, stress, and illness explain daily variations in fatigue? A prospective study. *Journal of psychosomatic research*, 76(4), 280-285. doi:10.1016/j.jpsychores.2014.01.005
- Albrecht, S. C., Kecklund, G., Rajaleid, K., & Leineweber, C. (2017). The longitudinal relationship between control over working hours and depressive symptoms: Results from SLOSH, a population-based cohort study. *Journal of affective disorders*, 215, 143-151. doi:10.1016/j.jad.2017.03.010
- Anderson, D. G. (2000). Coping strategies and burnout among veteran child protection workers. *Child Abuse & Neglect*, 24(6), 839-848.
- Anttila, T., Nätti, J., & Väisänen, M. (2005). THE EXPERIMENTS OF REDUCED WORKING HOURS IN FINLAND. *Community, Work & Family*, 8(2), 187-209.
- Arbetsmiljöverket. (2001). *Arbetsorsakade besvär 2001 (Work-Related Health Problems 2001)* (AM 43 SM 0101). Retrieved from Stockholm:
- Arbetsmiljöverket. (2012). *Arbetsorsakade besvär 2012 (Work-Related Disorders 2012)* (Report 2012:5). Retrieved from Stockholm:
- Arbetsmiljöverket. (2016). *Arbetsorsakade besvär 2016 (Work-Related Disorders 2016)* (Report 2016:3). Retrieved from Stockholm:
- Arbetsmiljöverket. (2018). *Arbetsorsakade besvär 2018 (Work-Related Disorders 2018)* (Report 2018:3). Retrieved from Stockholm:
- Aronsson, G., Astvik, W., & Gustafsson, K. (2014). Work Conditions, Recovery and Health: A Study among Workers within Pre-School, Home Care and Social Work. *The British Journal of Social Work*, 44(6), 1654-1672. doi:10.1093/bjsw/bct036
- Aspalter, C. (2008). The welfare state in cross-cultural perspective. *INternational social work*, 51(6), 777-789. doi:10.1177/0020872808095250
- Astvik, W., Melin, M., & Allvin, M. (2014). Survival strategies in social work: a study of how coping strategies affect service quality, professionalism and employee health. *Nordic Social Work Research*, 4(1), 52-66. doi:10.1080/2156857X.2013.801879
- Ball, J. E., Griffiths, P., Rafferty, A. M., Lindqvist, R., Murrells, T., & Tishelman, C. (2016). A cross-sectional study of 'care left undone' on nursing shifts in hospitals. *Journal of Advanced Nursing*, 72(9), 2086-2097. doi:10.1111/jan.12976
- Bamber, M. R. (2006). *CBT for occupational stress in health professionals*. London: Routledge.
- Bergmark, Å., & Lundström, T. (2007). Unitarian ideals and professional diversity in social work practice-the case of Sweden. *European journal of Social work*, 10(1), 55-72.
- Bildt, C., & Brynja, O. (2005). *Arbetsstidsförkortning och hälsa - En litteraturgenomgång av befintlig forskning [Reduced Working Hours and health - A literature review of existing research]* (Arbetslivsrapport NR 2005:11). Retrieved from Stockholm:
- Bildt Thorbjörnsson, C., Michélsen, H., & Kilbom, Å. (1999). Method for retrospective collection of work-related psychosocial risk factors for musculoskeletal disorders: Reliability and Aggregation. *Journal of occupational health psychology*, 4(3), 193-206.

- Brunnberg, E. (2001). *I välfärdens skugga - Socialt arbete med barn i Sverige och England* (CEFOS 16). Retrieved from <http://hdl.handle.net/2077/26209>:
- Collings, J. A., & Murray, P. J. (1996). Predictors of Stress Amongst Social Workers: An Empirical Study. *British journal of social work*, 26(3), 375-387.
- Corcoran, J. (2006). *Cognitive-behavioral methods for social workers*. Boston: Pearson.
- Creswell, J. W. (2003). *Research design, qualitative, quantitative and mixed methods approaches*. London: Sage.
- Dahlgren, A., Kecklund, G., & Åkerstedt, T. (2005). Different levels of work-related stress and the effects on sleep, fatigue and cortisol. *Scandinavian Journal of Work, Environment & Health*, 31(4), 277-285.
- Dellgran, P., & Höjer, S. (2005). Privatisation as professionalisation? Attitudes, motives and achievements among Swedish social workers. *European journal of Social work*, 8(1), 39-62.
- Demerouti, E., Bakker, A. B., & Bulters, A. J. (2004). The loss spiral of work pressure, work-home interference and exhaustion: Reciprocal relations in a three-wave study. *Journal of Vocational Behavior*, 64(1), 131-149. doi:[https://doi.org/10.1016/S0001-8791\(03\)00030-7](https://doi.org/10.1016/S0001-8791(03)00030-7)
- Edlund, B. M., & McDougall, A. G. (2017). *NVivo 11 Essentials*. Stallarholmen: Form & Kunskap AB.
- Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Cambridge: Polity.
- Frost, E., Höjer, S., & Campanini, A. (2013). Readiness for practice: social work students' perspectives in England, Italy, and Sweden. *European journal of Social work*, 16(3), 327-343.
- Geurts, S., & Sonnentag, S. (2006). Recovery as an explanatory mechanism in the relation between acute stress reactions and chronic health impairment. *Scandinavian Journal of Work, Environment & Health*, 32(6), 482-492.
- Hajjighasemi, A. (2019). *European welfare states and Globalization*. Cheltenham: Edward Elgar Publishing.
- Hedin, U.-C., & Månsson, S.-A. (2012). Whistleblowing processes in Swedish public organisations-complaints and consequences. *European journal of Social work*, 15(2), 151-167.
- Isidorsson, T. (2001). *Striden om tiden: arbetstidens utveckling i Sverige under 100 år i ett internationellt perspektiv (Time wars. Working Time development in Sweden in a Centennial and International perspective)*. (PhD Thesis), Göteborgs Universitet, Göteborg.
- Johnson, J. V., & Hall, E. M. (1988). Job strain, work place social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health*, 78(10), 1336-1342.
- Karasek, R., & Theorell, T. (1990). *Healthy work*. New York: Basic Books.
- Kecklund, G., Dahlgren, A., & Åkerstedt, T. (2002). *Undersökning av förtroendearbetstid: Vad betyder inflytande över arbetstiden för stress, hälsa och välmående?* Retrieved from Stockholm:



- Kinman, G., Grant, L., & Kelly, S. (2019). 'It's My Secret Space': The Benefits of Mindfulness for Social Workers. *The British Journal of Social Work*. doi:10.1093/bjsw/bcz073
- Knorring, L. v., & Lindström, E. (1995). *ICD-10 klassifikation av sjukdomar : kap. V - Psykiska sjukdomar och syndrom samt beteendestörningar. D. 1 Allmän psykiatri*. Malmö: Novo Nordisk Pharma.
- Kompier, M. A., Taris, T. W., & van Veldhoven, M. (2012). Tossing and turning – insomnia in relation to occupational stress, rumination, fatigue, and well-being. *Scandinavian Journal of Work, Environment & Health*(3), 238-246. doi:10.5271/sjweh.3263
- Kristensen, T. S., Bjorner, J. B., Christensen, K. B., & Borg, V. (2004). The distinction between work pace and working hours in the measurement of quantitative demands at work. *Work & Stress*, 18(4), 305-322.
- Lagsten, J., & Andersson, A. (2018). Use of information systems in social work – challenges and an agenda for future research. *European journal of Social work*, 21(6), 850-862. doi:10.1080/13691457.2018.1423554
- Larsson, S. (2009). A pluralist view of generalization in qualitative research. *International Journal of Research & Method in Education*, 32(1), 25-38. doi:10.1080/17437270902759931
- Lazarus, R. S. (1993a). Coping theory and research: Past, present, and future. *Psychosomatic Medicine*, 55(3), 234-247. doi:10.1097/00006842-199305000-00002
- Lazarus, R. S. (1993b). From psychological stress to the emotions: A history of changing outlooks. *Annual Revue of Psychology*, 44, 1-21.
- Lazarus, R. S. (2000). Toward better research on stress and coping. *American Psychologist*, 55(6), 665-673.
- Leineweber, C., Baltzer, M., Magnusson Hanson, L. L., & Westerlund, H. (2012). Work–family conflict and health in Swedish working women and men: a 2-year prospective analysis (the SLOSH study). *European Journal of Public Health*, 23(4), 710-716. doi:10.1093/eurpub/cks064
- Lewinson, P., Sullivan, M. J., & Grosscup, S. J. (1980). Changing reinforcing events: An approach to the treatment of depression. *PSYCHOTHERAPY: THEORY, RESEARCH AND PRACTICE*, 17(3), 322-334.
- Lloyd, C., King, R., & Chenoweth, L. (2002). Social work, stress and burnout: A review. *Journal of mental health*, 11(3), 255-265. doi:doi:10.1080/09638230020023642
- Lundström, T., & Vinnerljung, B. (2001). Omhändertagande av barn under 1990-talet. In (Vol. S. 289-336): *Välfärdstjänster i omvandling : antologi från Kommittén Välfärdsbokslut*.
- Löwenborg, C., & Sjöblom, Y. (2009). Föräldrars och ungdomars erfarenheter av familjebehandling inom socialtjänsten. *Socialvetenskaplig tidskrift*, 16(1), 56-71.
- Ma, N., Dinges, D. F., Basner, M., & Rao, H. (2015). How Acute Total Sleep Loss Affects the Attending Brain: A Meta-Analysis of Neuroimaging Studies. *Sleep*, 38(2), 233-240. doi:10.5665/sleep.4404
- Martell, C. R., Addis, M. E., & Jacobson, N. S. (2001). *Depression in context*. New York: Norton.

- Marttila, A., Whitehead, M., Canvin, K., & Burström, B. (2010). Controlled and dependent: Experiences of living on social assistance in Sweden. *International Journal of Social Welfare*, 19, 142-151. doi:10.1111/j.1468-2397.2009.00638.x
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory manual (3rd ed.)*. Palo Alto, CA: Consulting Psychologists Press.
- McEwen, B. S. (2006). Sleep deprivation as a neurobiologic and physiologic stressor: Allostasis and allostatic load. *Metabolism: Clinical and Experimental*, 55, 20-25.
- McEwen, B. S. (2013). The Brain on Stress:Toward an Integrative Approach to Brain, Body, and Behavior. *Perspectives on Psychological Science*, 8(6), 673-675. doi:10.1177/1745691613506907
- McEwen, B. S., & Stellar, E. (1993). Stress and the individual: Mechanisms leading to disease. *Archives of Internal Medicine*, 153(18), 2093-2101.
- McEwen, B. S., & Stellar, E. (2004). Protection and damage from acute and chronic stress: Allostasis and allostatic overload and relevance to the pathophysiology of psychiatric disorders. *Annals of the New York Academy of Sciences*, 1032(1-7).
- McFadden, P., Campbell, A., & Taylor, B. (2015). Resilience and Burnout in Child Protection Social Work: Individual and Organisational Themes from a Systematic Literature Review. *The British Journal of Social Work*, 45(5), 1546-1563. doi:10.1093/bjsw/bct210
- McGarrigle, T., & Walsh, C. A. (2011). Mindfulness, Self-Care, and Wellness in Social Work: Effects of Contemplative Training. *Journal of Religion & Spirituality in Social Work: Social Thought*, 30(3), 212-233. doi:10.1080/15426432.2011.587384
- McKibbin, K. A., & Gadd, C. S. (2004). A quantitative analysis of qualitative studies in clinical journals for the 2000 publishing years. *BMC Medical informatics and decision making*, 4(11).
- McLean, J., & Andrew, T. (1999). Commitment, Satisfaction, Stress and Control Among Social Services Managers and Social Workers in the UK. *Administration in social work*, 23(3-4), 93-117.
- Meeuwisse, A., Scaramuzzino, R., & Swärd, H. (2011). Everyday realities and visionary ideals among social workers in the Nordic countries: A matter of specialization and work tasks? *Nordic Social Work Research*, 1(1), 5-23.
- Meeuwisse, A., & Swärd, H. (2007). Cross-national comparisons of social work a question of initial assumptions and levels of analysis. *European journal of Social work*, 10(4), 481-496.
- Nätti, J., & Anttila, T. (1999). Experiments of Reduced Working Hours in Finnish Municipalities. *Journal of Human Resource Costing & Accounting*, 4(2), 45-61.
- Olsson, E., & Sundh, M. (2018). Perception of time in relation to work and private life among Swedish social workers – the temporal clash between the organisation and the individual. *European journal of Social work*, 1-12. doi:10.1080/13691457.2018.1423549
- Perlinski, M., Blom, B., & Morén, S. (2013). Getting a sense of the client: Working methods in the personal social services in Sweden. *Journal of Social Work*, 13(5), 508-532. doi:10.1177/1468017311435047

- Savaya, R. (2012). Social worker burnout in Israel: Contribution of daily stressors identified by social workers. *British journal of social work*, 42(1), 1-16.
- SELYE, H. (1946). THE GENERAL ADAPTATION SYNDROME AND THE DISEASES OF ADAPTATION1. *The Journal of Clinical Endocrinology & Metabolism*, 6(2), 117-230. doi:10.1210/jcem-6-2-117
- Siebert, D. C. (2006). Personal and Occupational Factors in Burnout Among Practicing Social Workers. *Journal of Social Service Research*, 32(2), 25-44.
- Socialstyrelsen. (2003). *Utmattningssyndrom - Stressrelaterad psykisk ohälsa (Exhaustion syndrome - Stress related mental ill health)*. Retrieved from Stockholm:
- Socialstyrelsen. (2005). *Ändringar i och tillägg till Klassifikation av sjukdomar och hälsoproblem 1997 (KSH) - systematisk förteckning [Changes in and additions to Classification of Diseases and related Health Problems 1997 (CDH) - systematic catalogue]*. Retrieved from Stockholm:
- Socialstyrelsen. (2008). *Social tillsyn - Länsstyrelsernas iakttagelser under 2006 och 2007 [Social supervision - Observations by the County Boards during 2006 and 2007]*. Retrieved from Stockholm:
- Socialstyrelsen. (2010). *Social tillsyn - Länsstyrelsernas iakttagelser under 2008 och 2009 [Social supervision - Observations by the County Boards during 2008 and 2009]*. Retrieved from Stockholm:
- Socialstyrelsen. (2011). *Tillsynsrapport 2011 Hälso- och sjukvård och socialtjänst [Supervision report 2011 Healthcare and social services]*. Retrieved from Stockholm:
- Sonnentag, S., Binnewies, C., & Mojza, E. J. (2010). Staying well and engaged when demands are high: The role of psychological detachment. *Journal of applied psychology*, 95(5), 965-975.
- Storey, J., & Billingham, J. (2001). Occupational stress and social work. *Social Work Education*, 20(6), 659-670.
- Sunesson, S., Blomberg, S., Edebalk, P. G., Harrysson, L., Magnusson, J., Meeuwisse, A., . . . Salonen, T. (1998). The flight from universalism. *European journal of Social work*, 1(1), 19-29.
- Tham, P. (2007). Why Are They Leaving? Factors Affecting Intention to Leave among Social Workers in Child Welfare. *British journal of social work*, 37(7), 1225-1246. doi:10.1093/bjsw/bcl054
- Tham, P. (2018a). A Professional Role in Transition: Swedish Child Welfare Social Workers' Descriptions of Their Work in 2003 and 2014. *The British Journal of Social Work*, 48(2), 449-467. doi:10.1093/bjsw/bcx016
- Tham, P. (2018b). Where the need is greatest: a comparison of the perceived working conditions of social workers in Swedish metropolitan low-, middle- and high-income areas in 2003 and 2014. *Nordic Social Work Research*, 8(2), 185-200. doi:10.1080/2156857X.2017.1326975
- Tham, P., & Meagher, G. (2009). Working in Human Services: How Do Experiences and Working Conditions in Child Welfare Social Work Compare? *British journal of social work*, 39(5), 807-827. doi:10.1093/bjsw/bcm170

- Theorell, T. (2003). *Är ökat inflytande på arbetsplatsen bra för folkhälsan? (Is increased work influence beneficial to public health?)*: Statens Folkhälsoinstitut (Swedish National Institute of Public Health).
- Theorell, T. (2007). *I spåren av 90-talet [In the wake of the 90's]* Stockholm: Karolinska Institutet University press.
- Thompson, N., Stradling, S., Murphy, M., & O'Neill, P. (1996). Stress and Organizational Culture. *British journal of social work*, 26(5), 647-665.
- Webb, C. M., & Carpenter, J. (2012). What Can Be Done to Promote the Retention of Social Workers? A Systematic Review of Interventions. *British journal of social work*, 42(7), 1235-1255. doi:10.1093/bjsw/bcr144
- Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12(2), 237-268. doi:[https://doi.org/10.1016/S1053-4822\(02\)00048-7](https://doi.org/10.1016/S1053-4822(02)00048-7)
- Zapf, D., & Holz, M. (2006). On the positive and negative effects of emotion work in organizations. *European Journal of work and organizational psychology*, 15(1), 1-28. doi:10.1080/13594320500412199
- Åkerstedt, T., Hume, K., Minors, D., & Waterhouse, J. (1994a). The meaning of good sleep: a longitudinal study of polysomnography and subjective sleep quality. *Journal of Sleep Research*, 3(3), 152-158. doi:10.1111/j.1365-2869.1994.tb00122.x
- Åkerstedt, T., Hume, K., Minors, D., & Waterhouse, J. (1994b). The Subjective Meaning of Good Sleep, An Intraindividual Approach Using the Karolinska Sleep Diary. *Perceptual and Motor Skills*, 79(1), 287-296. doi:10.2466/pms.1994.79.1.287
- Åkerstedt, T., Olsson, B., Ingre, M., Holmgren, M., & Kecklund, G. (2001). A 6-hour working day - effects on health and well-being. *Journal of human ergology*, 30(1-2), 197-202.



**Karolinska  
Institutet**