SELF-EFFICACY AT WORK
SOCIAL, EMOTIONAL, AND COGNITIVE DIMENSIONS

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Abstract

Research has shown that self-efficacy is one of the most important personal resources in the work context. However, research on working life has mainly focused on a cognitive and task-oriented dimension of self-efficacy representing employees’ perceptions of their capacity to successfully complete work tasks. Thus, little is known about the influence that believing in one’s social and emotional competence could have. This thesis aims to expand previous theory regarding self-efficacy in the workplace by investigating social, emotional, and cognitive self-efficacy dimensions in relation to leadership, health, and well-being.

The thesis rests on four empirical studies, all related to health and well-being, and including at least one self-efficacy dimension. Study I employed questionnaire data from 169 Swedish high school students. The other three studies were based on questionnaire data obtained during a three-year international health-promoting leadership research project. These participants were employees and leaders from 229 different teams in 12 organizations in Sweden and Germany representing a wide range of occupations.

Study I supported the idea that emotional self-efficacy is an important antecedent to prosocial behaviour and also highlighted the value of differentiating between different dimensions of self-efficacy. Study II validated the new work-related Occupational Social and Emotional Self-efficacy Scales; and indicated that these dimensions are positively related to well-being. However, Study III showed that emotional exhaustion in followers crossed over to leaders when the leaders’ emotional self-efficacy was high. Study IV revealed that transformational leadership and social self-efficacy can be positive for team climate.

The main theoretical contribution of this thesis is to expand previous theory regarding self-efficacy in the workplace by incorporating social, emotional, and cognitive dimensions. The main practical implication is that the new Occupational Social and Emotional Self-efficacy Scales can be used to promote health and well-being in the workplace through activities such as recruitment, staff development, and team-building. This thesis suggests that (a) training managers to exert transformational leadership behaviours may simultaneously promote team climate, and this process may be mediated by social self-efficacy, (b) it may be counterproductive to enhance leaders’ emotional abilities in a team of exhausted followers, since the result can be an exhausted leader rather than an exhilarated team, (c) interventions aimed at improving health and well-being should be specific to each work setting, and (d) a more holistic approach where the mutual influence between leaders and followers is considered may be beneficial for healthier work environments.

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Key words: Social self-efficacy, emotional self-efficacy, occupational self-efficacy, team climate, emotional exhaustion, emotional irritation, transformational leadership.
To Astrid
List of Papers

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


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Study IV: The relation between transformational leadership and team climate. The mediating role of social self-efficacy

Discussion

Main findings

Emotional self-efficacy oriented towards oneself or others

The dimensionality of self-efficacy at work

Crossover of emotional exhaustion and work engagement from followers to leader

Transformational leadership, social self-efficacy and team climate

Methodological considerations

Future research

Practical implications

Concluding remarks

Svensk sammanfattning

Acknowledgements

References

Appendix A

Overview of different concepts of occupational-, emotional- and social self-efficacy

Appendix B

Items for the Self-efficacy Scales used in Study II-IV
Abbreviations

ESES  Emotional self-efficacy scale
JD-R Theory  Job Demands-Resources Theory
NEW OSH ERA  New and Emerging Risks in Occupational Safety and Health
OCB  Organizational Citizenship Behaviour
OCCSEFF  Occupational Self-efficacy Scale
OESE  Occupational Emotional Self-efficacy Scale
OSSE  Occupational Social Self-efficacy Scale
POB  Positive Organizational Behaviour
PSSE  General Social Self-efficacy Scale
RE-SU-LEAD  REwarding andSU stainable health-promoting LEADership
SCT  Social Cognitive Theory
S-E  Self-efficacy
SSCI  Social Skills Subscale of the Skills Confidence Inventory
SSE  Social Self-Efficacy subscale of the General- ized Self-Efficacy Scale
TCI  Team Climate Inventory
WSSE  Workplace Social Self-efficacy
Introduction

This thesis rests on four empirical studies, which are bound together by the common denominator that they all constitute studies of self-efficacy. The first study can be seen as preparatory and eye-opening for continuing to investigate different dimensions of self-efficacy. The three following studies are all based on data from the international research project RE-SU-LEAD (Rewarding and sustainable health-promoting leadership). The overall aim of the RE-SU-LEAD project was to explore the role of leadership in relation to workers’ psychological well-being with special consideration being given to work characteristics and the differences in leadership between the samples in the three European countries, Finland, Sweden and Germany. RE-SU-LEAD was supported by Grant F 2199 in the context of NEW OSH ERA (New and Emerging Risks in Occupational Safety and Health) within the sixth European framework (ERA-NET scheme). My contribution in this project has been to explore social, emotional, and cognitive dimensions of self-efficacy at work and to relate them to leadership, health and well-being. Only data from Sweden and Germany were used in this thesis.

The research problem and rationale for the thesis

Previous research has shown that self-efficacy is one of the most important personal resources in the work context (Heuven, Bakker, Schaufeli, & Huisman, 2006; Judge & Bono, 2001; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998) and is viewed as one of the core constructs of positive organizational behaviour (Luthans, Youssef, & Avolio, 2007). Self-efficacy is domain-specific (Bandura, 1997) and within the work context there are several domains. However, research on working life has mainly focused on the cognitive and task-oriented dimension of self-efficacy. However the nature of work for both leaders and followers involves tasks such as engaging in social interactions and handling emotionally demanding situations. Thus, work in several areas such as the service sector, poses social and emotional demands as well as cognitive and physical ones (de Jonge, Le Blanc, Peeters, & Noordam, 2008). Therefore, it is reasonable to expect that confidence in your own capability (e.g. self-efficacy) within the social and emotional domains is vital. However, since research has primarily focused on employees’
perceptions of their capability to competently and successfully complete their work tasks, little is known about the influence that believing in your social and emotional competence could have. In this thesis, work-related social self-efficacy refers to an employee’s confidence in his/her capability to engage in the social interactional tasks necessary to initiate, maintain, and develop interpersonal relationships at work. Work-related emotional self-efficacy refers to an employee’s confidence in his or her capability to perceive, understand, regulate, and use emotional information at work. Social interactions at work can pose either a resource or a work demand. That is to say, if you work together with people who are helpful, considerate, and appreciative, the social interactions will be perceived as positive (a resource), but if you collaborate with people who behave in an alienating and dismissive manner, the social interactions can become highly demanding (a work demand). How the quality of the social relationships are perceived will depend, for example, on the various social and emotional competencies in the work group and amount of support available from leaders, which in turn, can affect the experience of well-being and strain in workers (e.g. Liden, Wayne, & Sparrowe 2000; Liu, Nauta, Spector, & Li, 2008; Scott & Judge, 2009). This line of reasoning leads to the conclusion that there is a need to widen the field of self-efficacy within the work context by also examining its social and emotional dimensions. Thus within the framework of this thesis the theory of self-efficacy is further developed by exploring social and emotional self-efficacy at work. In order to do this, two new scales to measure social and emotional self-efficacy have been developed, tested, and examined in relation to cognitive task-oriented (occupational) self-efficacy, leadership, health, and well-being.

Previous research has shown that the study of task-oriented cognitive self-efficacy has provided valuable knowledge about different behaviours and outcomes at work (see for example Mohr, Müller, Rigotti, Aycan, & Tschan, 2006; Rigotti, Schyns, & Mohr, 2008; Schyns & Collani, 2002). Indeed, gaining knowledge of social and emotional dimensions of self-efficacy at work can further develop the current understanding of self-efficacy. Self-efficacy is domain specific, that is, an individual can have a high belief in the capability in one area and low belief in the capability in another. This means that at work an employee can simultaneously have high self-efficacy for the capability to solve the actual work task (e.g. occupational self-efficacy), but low self-efficacy in having to interact and cooperate with colleagues (e.g. social self-efficacy), and low self-efficacy for understanding negative emotional expressions from colleagues (e.g. emotional self-efficacy). As the proportion of service-oriented jobs (or emotional labour) increases, the demand for social and emotional intelligence is becoming increasingly necessary, which in turn makes self-efficacy in these areas in-
creasingly relevant. Research has also shown that it is possible to train self-efficacy in various fields (for an overview see Bandura, 1997).

It is the work context that primarily sets the frame for this thesis, and within this framework, the social, emotional and cognitive dimensions of self-efficacy are related to leadership, health, and well-being. Studies that investigate process-oriented questions of when (moderating effects) and how (mediating effects) social and emotional self-efficacy influences the relationship between leadership and health and well-being over time, appear non-existent or, at least, rare within work- and organizational psychology. Consequently, by addressing these process questions the goal for this thesis is to provide a more comprehensive picture of the meaning and consequences of self-efficacy at work. Two perspectives were used in this research: bottom up – which refers to when do followers influence the well-being of their leaders (Study III), and top down – how do leaders influence the well-being of their followers (Study IV).

Structure of the thesis

This thesis consists of four studies accompanied by this ‘kappa’ text, which summarizes and connects the included studies. The kappa consists of six sections. After this first section, which introduces and presents the background of the research problem, the second section presents both the overall and specific aims of the thesis. In the third section the conceptual framework of the thesis and previous research on self-efficacy is described in order to provide insights into the current relevant research in the field. The fourth section gives an overview of the design, setting, methods; participants, procedure, measures used, and a description of relevant ethical considerations for the studies and statistical analyses. The fourth section also consists of extended summaries of the four studies including aims, hypotheses and questions and major findings. In the fifth section, these findings are discussed in relation to previous research and their implications for theory and practice. In addition, the strengths and limitations of the research design and methods are discussed. Finally, in the sixth section, conclusions are presented.
Aim of the thesis

Overall aim

The overall aim of this thesis is to expand previous theory regarding self-efficacy in the workplace by investigating social, emotional, and cognitive self-efficacy dimensions in relation to leadership, health, and well-being. Thus, the overall objectives of the current thesis are: 1) to develop and test the short work-related scales Occupational Social Self-efficacy Scale and Occupational Emotional Self-efficacy Scale and compare them to the existing cognitive task oriented Occupational Self-efficacy scale; 2) to investigate the relations between work-related social, emotional, and cognitive self-efficacy and leadership and work-related well-being (i.e. emotional exhaustion, emotional irritation, work engagement and team climate); 3) to add to the development of a more integrated literature on leadership which consider leaders and followers alike and recognizes their mutual influence in shaping their work experiences where leadership can be seen as a social interaction process; and 4) to explore the possibilities of an integration between the fields of self-efficacy and empathy by investigating emotional self-efficacy as a personal resource to promote prosocial behaviour.

Specific aims

Aims for included papers:

I. The aim of study I was to study the role of high school students’ academic and emotional self-efficacy in their self-reported prosocial behaviour and to investigate the possible value of distinguishing between self- and other-oriented (empathic) emotional self-efficacy.

II. The aim of Study II was to develop and test the short work-related Occupational Social Self-efficacy Scale and Occupational Emotional Self-efficacy Scale”. The aim was also to compare the social and emotional dimensions to a task-oriented cognitive dimension and relate them to team climate, emotional exhaustion, and emotional irritation.
III. The aim of Study III was to examine whether followers’ emotional exhaustion and work engagement can crossover to their leaders over time, as well as whether individual differences in leaders’ emotional self-efficacy act as a moderator for the proposed longitudinal cross-over effects from followers to leaders.

IV. The main aim of Study IV was to investigate both the synchronous and longitudinal relationships between follower perceptions of transformational leadership and team climate, as well as the mediating effects of work-related social self-efficacy.
This thesis is an in-depth study of efficacy beliefs within their social, emotional and cognitive dimensions, and how these efficacy beliefs relate to work leadership, health, and well-being. Thus, self-efficacy is the major theoretical concept for all four empirical studies. The concept of self-efficacy is defined as the set of “beliefs in one’s capacities to organize and execute the courses of actions required to produce given attainments” (Bandura, 1997, p.3). Thus, this theory is positioned within the framework of the Social Cognitive Theory (SCT) proposed by Albert Bandura (1977; 1989; 1997; 2001). The SCT postulates that the beliefs people have about themselves are key elements in the exercise of control and agency in which people are both products and producers of their own environments (Pajares, 1996). The SCT assumes that self-efficacy is the key personal resource, which not only helps to understand people’s behaviour, but also the antecedents and consequences of these behaviours. There are three levels of the general assessment of self-efficacy: as a global construct generalized over several domains; as a domain specific variable (on an intermediate level); and as a task-specific variable (Bandura, 1977, Pajares, 1996). Self-efficacy has also been argued to best meet the inclusion criteria for psychological capital, a composite construct that Luthans, et al., (2007) define as “an individual’s positive psychological state of development” (p. 3). Taken to an occupational setting, self-efficacy is also viewed as one of the four core constructs of positive organizational behaviour (POB), which comprises the study and application of positively oriented human resources, strengths and psychological capacities (Luthans et al., 2007).

Consistent with the SCT and POB, in this thesis health refers to the individual’s ability to achieve her or his vital goals in standard conditions (Nor-denfelt, 1995) with a focus on personal resources and capacities to create health, rather than risk factors for ill-health and disease (Antonovsky, 1987). Thus, health is more than the absence of disease; it is a resource that allows people to realize their aspirations, satisfy their needs and to cope with the environment. In the work context, health enables the social, economic and personal development fundamental to well-being. The concept of well-being is complex, and in this thesis it is defined as “the balance point between an individual’s resource pool and the challenges (i.e. demands) faced” (Dodge, Daly, Huyton, & Sanders, 2012, p. 230). This definition reflects the current
emphasis on positive psychology, in which individuals’ are viewed “as deci-
sion makers, with choices, preferences, and the possibility of becoming master-
tful, efficacious” (Seligman, 2002, p. 3). A stable well-being is, in essence, 
when individuals have the psychological, social and physical resources they 
need to meet a particular psychological, social and/or physical challenge 
(demand) they face. When individuals have more challenges than resources, 
their wellbeing decreases, and vice-versa.

For Study I, the possibilities of an integration between the fields of self-
efficacy and empathy were explored by investigating emotional and empath-
ic self-efficacy as personal resources to promote prosocial behaviour. The 
main theoretical model considered for Study II–IV was the Job Demands-
Resources (JD-R) theory (Bakker & Demerouti, 2014; Crawford, LePine, & 
Rich, 2010; Halbesleben, 2010; Nahrgang, Morgeson, & Hofmann, 2011), 
which initially was referred to as the JD-R Model. The JD-R theory recog-
nizes the uniqueness of each environment, that is, the specific organizational 
and job characteristics that are mainly responsible for employee well-being. 
According to the JD-R theory, well-being is determined by two types of 
work characteristics: job demands and job resources. Bakker and Demerouti 
(2008) expanded the JD-R theory by adding personal resources, of which 
self-efficacy is considered one of the most important. In line with the JD-R 
theory, leaders are also often regarded as a resource for followers, fostering 
their optimism and work engagement (see for example Tims, Bakker, & 
Xanthopoulou, 2011), as well as reducing perceived stress and emotional 
exhaustion (Thomas & Lankau, 2009). In Study III and IV, leadership was a 
central concept and considered as a social process that is affected not only by 
individual behaviour but also by situational, team, and organizational charac-
teristics. In line with this, an integrated perspective was used for Study III, 
where leadership was examined as a mutual influence process between lead-
ers and followers (e.g. Bono & Yoon, 2012; Uhl-Bien, Riggio, Lowe, & 
Carsten, 2014) and the concept of crossover was used. Crossover describes 
the experience of the psychological states in one person affecting the experi-
ence of congruent states in another individual (e.g. Bakker, Westman, & van 
Emmerik, 2009; Westman & Bakker, 2008). In this study, the crossover 
from followers to leaders was explored. Furthermore, for Study IV, the theory 
of Transformational leadership was particularly helpful because it considers 
the relation between leader and follower as an interaction (Bass & Riggio, 
2006). Moreover, Charnbonneau, Barling, and Kelloway (2001) clarified 
that transformational leaders are more likely to empower rather than control 
their followers. More specifically, because this leadership style is supportive 
and promotes autonomy it can enhance intrinsic motivation in followers and 
this empowering process is thought to increase followers’ self-efficacy.
The following paragraphs further expand on the descriptions of the conceptual framework of the thesis. Previous research is also included in order to provide insights into the relevant research in the field.

**Nature and structure of self-efficacy**

The Social Cognitive Theory (SCT) is derived from the Social Learning Theory (SLT) proposed by Miller and Dollar in 1941. This theory posits that if humans are motivated to learn a particular behaviour, they will learn through clear observations and imitation of these observed actions (Miller & Dollard, 1941). Bandura expanded upon and theorized the propositions of social learning which resulted in the development of the SCT. The SCT assumes that human beings are active agents that can influence vital aspects of their lives. Further, they adapt to the aspects they like in their environment, while they try to change the aspects they find undesirable. Thus, human agency operates within an interdependent causal structure, which involves triadic reciprocal causation among behaviour, personal factors, and the environment (Bandura, 1986, 1997). For this thesis, when the SCT is applied to work and organizational psychology, efficacy beliefs may be considered as components of a dynamic interaction of personal factors (self-efficacy), the environment (job and organizational demands and resources, leadership etc.) and behaviour (work engagement, team climate, emotional exhaustion etc.)

**Domains and measurements of self-efficacy**

Self-efficacy varies on three different indices that have important implications for performance: (a) The level of task complexity that individuals perceive themselves able to cope, (b) how strongly they believe they are capable of coping with a task of that complexity, and (c) the ability to generalize their abilities and apply them from one area to another (Bandura, 1986, 1997; Endler, Speer, Johnson & Flett, 2001; Tompson & Dass, 2000). It is also possible to distinguish among three levels in the general assessment of self-efficacy at work: (1) As a global construct generalized over several domains without specifying the activities or the conditions under which they must be performed (Jerusalem, & Schwarzer, 1992, Shelton, 1990, Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982), (2) as a domain specific variable (on an intermediate level) for a range of performances within the same activity domain under a range of conditions sharing common properties (Rigotti, et al, 2008; Schyns & Collani, 2002), as well as (3) a task-specific variable to predict distinct behaviour in specific work tasks under a specific set of conditions (Bandura, 1977, Pajares, 1996). Importantly, general or global self-efficacy, as an overall feeling of mastery of
one’s life has been shown to be relatively stable. In contrast, domain and task specific self-efficacy seems to be less stable and can be influenced e.g. by training (Bandura, 1997; Schyns & Moldzio, 2009). This raises questions to some of the trait based psychometric procedures for evaluating self-efficacy measures. For example to estimate reliability by invariance over time, because efficacy beliefs may change over time.

People may judge themselves efficacious across a wide range of activity domains, or only in certain domains of functioning. The specific scope or level that self-efficacy should be assessed varies depending on what one seeks to predict and the amount of prior knowledge available about the situational demands. If the purpose is to explain and predict a particular level of performance in a given situation, an efficacy measure of high specificity is most relevant (Bandura, 1997). For this thesis the purpose of the different studies has been to explain and predict specific psychological constructs related to well-being (prosocial behaviour, work engagement, and team climate) and strain (emotional irritation and emotional exhaustion) in given situations in school or at work. Therefore, intermediate level self-efficacy measures were used, as opposed to general or task-specific measures. This was because the domains of interest were given (high school- or work context) and the dimensions within these domains were specified (cognitive, social, and emotional), but within the domains, the situations under investigation were commonly experienced (in many high schools or work contexts).

Bandura (1997) argues that the relevant issue in predicting composite performance is not specificity versus globality of measures; rather, the issue is with indistinct omnibus measures (all-purpose measure) versus integrated multi-domain measures. This is because the items in an omnibus test are usually cast in an overly general form, requiring respondents to try to guess what the unspecified situational particulars might be. The more general the items, the greater is the burden on respondents to figure out what is being asked of them. The indefiniteness of every key term in the item produces considerable ambiguity and variation among individuals in what they assume is being measured. Omnibus measures create problems concerning the predictive relevance of what is measured as well as obscurity about what is being assessed (Bandura, 1997). Efficacy beliefs in the work domain are a good case in point. An all-purpose test of perceived general self-efficacy would be phrased in terms of individuals’ general belief that they can make things happen, without specifying what those things are, under which circumstances and in which situations. Such a measure would most likely be a weak predictor of attainments in a particular aspect of work. For example in a work group discussion where you are unfamiliar with the other participants, you disagree with them on every issue discussed and the goal is to convince the group of your suggestions.
The aim of this thesis is to contribute to an understanding of the role that the social, emotional, and cognitive dimensions of self-efficacy at work have in relation to leadership and health and well-being. Thus, to be able to achieve explanatory and predictive power for the empirical studies in this thesis, Banduras (2006) guidelines were used to tailor the measures of self-efficacy to the specified domains of functioning which represented incremental gradations of task demands within those domains. Bandura (1997) recommends that sufficient impediments and challenges should be built into efficacy items to avoid ceiling effects. For the different empirical studies in this thesis, this required clear definitions of the activity domains of interest and a good conceptual analyses of its different facets, the types of capabilities it called upon, and the range of situations in which these capabilities might be applied (Bandura, 1997).

People's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances can also be studied and measured on a group level, and is then referred to as collective efficacy. Perceived collective efficacy is defined as “a group’s shared belief in its conjoint capabilities to organize and execute the courses of actions required to produce given levels of attainments” (Bandura, 1997, p. 477). In a work context, for some organizations, the subsystems and activities must be tightly integrated, whereas in others they are only loosely coupled. Aggregating members’ beliefs in their own self-efficacy is the more relevant measure when the group outcome is produced through highly interdependent effort (Bandura, 1997). Participants in the studies for this thesis are generally coordinated and supportive of one another, but the outcomes are typically produced independently. Thus, for this thesis, the individual level (self-efficacy) is used.

Differentiating self-efficacy from related concepts

Aspects of self: Self-concept, self-esteem, and self-efficacy

One's overall perceptions, beliefs, judgments, and feelings are referred to as sense of self. For adults, the term self is generally used in reference to the conscious reflection of one’s own being or identity, as an object separate from others and/or the environment. Self-concept is often considered as the cognitive or thinking aspect of self (related to one’s self-image) and generally refers to the totality of a complex, organized, and dynamic system of learned beliefs, attitudes, and opinions that each person holds to be true about his or her personal existence (Hattie, 1992; Purkey, 1988). Theoretically, self-concept consists of two parts: a self-knowledge part which is referred to as self-descriptions (thoughts of the self -e.g. “I have red hair”), and a self-esteem part which is an affective evaluation of, or feeling regarding, the self (e.g. how I feel about having red hair, whether I consider it good or
bad). Some authors use the terms self-efficacy, self-concept and self-esteem interchangeably as though they represent the same phenomenon. In fact, there are clear differences: Self-efficacy is a judgment of the confidence that one has in one’s capabilities, whereas self-concept is a description of one’s own perceived self (self-description), accompanied by an evaluative judgment of one’s self-worth (self-esteem) (Bandura, 1997; Leary & Baumeister 2000; Pajares & Schunk, 2001). In a work context the difference between self-efficacy and self-concept (of which self-esteem is one part) can be summarized by demonstrated how they give rise to quite different questions. A typical self-concept item such as “Computers make me feel inadequate” differs distinctly from a self-efficacy question that may begin with “How confident are you that you successfully can install a new program on your computer?” The answers to the self-concept question reveal how positively or negatively you view yourself, as well as how you feel in those areas, whereas the answers to the self-efficacy questions reveal the degree of confidence you possess in your capability to accomplish the task or succeed at the activity in question (Betz & Klein, 1996; Brockner, 1988; Chen, Gully, & Eden, 2001; Gardner & Pierce, 1998).

Moreover, there is no fixed relationship between beliefs about one’s capabilities (self-efficacy) and whether one likes or dislikes oneself (self-esteem). Individuals may judge themselves hopelessly inefficacious in a given activity domain without suffering any loss of self-esteem whatsoever, because they do not invest their self-worth in that activity (Bandura, 1997). Thus, failure in an domain deemed not important would not lead to lowered self-esteem, whereas failure in domains attributed as very central to the person would harm her or his self-esteem. Hence, if your goal is to be a master chef in a famous restaurant, doing poorly in the kitchen (work domain) may severely damage both your self-esteem and your self-efficacy. Being a bad tennis player on the other hand, an activity you pursue just for fun (leisure domain), probably won’t affect your self-esteem much, although your self-efficacy may be lowered. It is true, however, that people tend to cultivate their capabilities in activities that give them a sense of self-worth.

**Explaining outcomes: Self-efficacy, outcome expectancies, and locus of control**

Self-efficacy, outcome expectancies, and locus of control are at times mistakenly viewed as principally the same phenomenon but they represent entirely different phenomena. Self-efficacy is a judgement of one’s capability to organize and execute given types of performances, outcome expectation is a judgement of the likely consequences such performances will produce, and locus of control concerns beliefs about whether actions affect outcomes (Bandura, 1997). The conditional relationship between self-efficacy beliefs and outcome expectancies depends on how tightly contingencies between
actions and outcomes are structured. For instance, in activities where outcomes are highly contingent on quality of performance, the types of outcomes people anticipate depend largely on how well they believe they will be able to perform in given situations. For example, in a work context, sales staff who show poor sales figures do not expect to get extra bonus on their salary. Thus, were performance determines outcome, self-efficacy beliefs account for most of the variance in expected outcomes. This is true for diverse spheres of functioning in work contexts: from occupational performance (Barling & Beattie, 1983) to the choice of the cultural milieu in which to pursue one’s occupation (Singer, 1993). On the other hand, the conceptual distinction between self-efficacy and locus of control is validated empirically and various studies have showed that self-efficacy and locus of control bear little or no relationship to each other (Bandura, 1991b). Indeed, several studies across diverse activities show that perceived self-efficacy is a strong predictor of behaviour, whereas locus of control is either weak or does not predict behaviour at all. For example, self-efficacy predicts academic performance, proneness to anxiety, pain tolerance, metabolic control in diabetes, and political participation, whereas locus of control does not (Grossman, Brink, & Hauser, 1987; Manning & Wright, 1983; McCarthy, Meier, & Rinderer, 1985; Smith, 1989; Taylor & Popma, 1990; Wollman & Stouder, 1991).

**Whether you think that you can or that you can’t, you are usually right**

Effective personal functioning is not merely a question of knowing what to do and being motivated to do it. Nor is self-efficacy a fixed ability that one does or does not have in one’s personal repertoire. Rather, self-efficacy is a generative capability in which cognitive, social, emotional, and behavioural subskills have to be organized and effectively coordinated to serve continuity purposes. Bandura (1997) states that there is a clear difference between possessing sub-skills, and being able to integrate them into appropriate courses of action and execute them well under challenging conditions. Self-efficacy is concerned not with the number of skills you have, but what you believe you can do with what you have under a range of circumstances (Bandura).

Efficacy beliefs operate as a key factor in a generative system of human competencies. Hence, different people with similar skills, or the same person under different circumstances, may perform poorly, adequately, or extraordinarily, depending on fluctuations in their beliefs of personal efficacy (Bandura, 1997). For example, in a work context two employees can have taken the same courses with identical grades prior to being employed, but if one of them has low self-efficacy, it is likely that this individual will perform worse on the job compared to the employee with high self-efficacy. Skills can be easily overruled by self-doubts, so that even highly talented individuals make poor use of their capabilities under circumstances that undermine their beliefs in themselves (Bandura & Jourden, 1991; Wood & Bandura, 1989).
Sources of self-efficacy

Some researchers such as Petrides and his colleagues (2001, 2006, 2007) suggest that self-efficacy can be viewed as relatively stable, trait-like personality constructs. However, many researchers in the field follow Bandura’s view that self-efficacy concerns a state rather than a fixed trait, although general or global self-efficacy is more stable than domain or task specific. Thus, the self-efficacy theory is open to development. The overall aim of this thesis is to expand previous theory regarding self-efficacy in the workplace by investigating social, emotional, and cognitive self-efficacy dimensions in relation to leadership, health, and well-being. In developing the theory of self-efficacy, it will be possible to target the domains where training could be beneficial. Self-efficacy beliefs are constructed from four principal sources of information which forms the basis of guidelines for enhancement of efficacy beliefs (Bandura, 1997): Enactive mastery experiences that function as indicators of capability; vicarious experiences that alter efficacy beliefs through transmission of competences and comparisons with the achievements of others; verbal persuasion and related types of social influences that indicate one possesses certain capabilities; and psychological and affective states from which individuals partly judge their capability, strength, and vulnerability to dysfunction. Any given influence, depending on its form, may operate through one or more of these sources of efficacy information (Bandura, 1986, 1997). Self-efficacy can be both weakened and strengthened on the basis of the interpretation of these sources. In the following paragraphs, the four principal sources are explained more in detail.

Mastery experience: Interpretations of past performance

According to Bandura (1997), the most influential source of information for forming self-efficacy beliefs consists of interpretations of past performance. This is because past performance provides the most authentic evidence of whether one can mobilize what it takes to succeed. These interpretations are used to assess one’s capability to engage in future similar activities and whether one will act in agreement with this assessment. Successes build a robust belief in one’s personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established. Low self-efficacy individuals also tend to prefer to dismiss successful exploits than to bolster their sense of self-efficacy (Stajkovic & Luthans, 1998). However, if individuals only experience easy successes, they may come to expect quick results and become easily discouraged by failure. A sustainable sense of efficacy requires experiences in overcoming obstacles through persistent efforts. Thus, difficulties provide opportunities to learn how to turn failure into success by honing one’s capabilities to exercise better control of events (Bandura, 1997). Empirically the power of mastery experiences to create and strengthen efficacy beliefs has been compared with other modes of influences.
such as modeling of strategies, cognitive simulation of successful performances, and tutorial instructions. These studies show that enactive mastery produces stronger and more generalized efficacy beliefs than do modes of influence that rely solely on vicarious experiences, cognitive simulations, or verbal instructions (Bandura et al., 1977; Biran & Wilson, 1981; Feltz, Landers, & Raeder, 1979; Gist, Schwoerer & Rosen, 1989).

Vicarious experience: Observing the actions of others

Another source of information for forming self-efficacy beliefs includes when individuals observe the actions of others (modeling) and then see what impact these actions have (Bandura, 1997). When individuals are unsure of their capacity, or when they have limited past experience, they are more sensitive to vicarious experience, which can either decrease or increase their self-efficacy. Vicarious experience is also more powerful when an observer perceives similarities between a model and themselves in relation to any attribute, and as a result, infers that the model's performance is predictive of their own capacity. When individuals perceive a model to be different from themselves, the influence of vicarious experience is minimal (Pajares, 2001). Mastery modeling is being widely applied with positive results to develop intellectual, social, emotional, and behavioural competences (Bandura, 1986). Studies reveal that seeing or visualizing individuals similar to oneself perform successfully in certain activities typically raises efficacy beliefs in observers’ beliefs of their own future capability to perform in similar activities (Bandura, 1982; Schunk, Hanson, & Cox, 1987). By the same token, observing others fail despite high effort has been shown to lower the observers’ judgement of their own capabilities and undermine their efforts (Brown & Innouye, 1978).

Social persuasion: Social impact from others

Individuals’ assessment of self-efficacy is also shaped by the social influence of others (Bandura, 1997). This is closely linked to social support and feedback processes. Persuasive efficacy information is often embedded in the evaluative feedback given to performers, and it can be presented in ways that either undermine a sense of efficacy or bolster it. The effects of evaluative feedback on efficacy beliefs in children have been investigated extensively by Schunk and his colleagues (Schunk, 1982, 1983, 1984; Schunk & Cox, 1986; Schunk & Rice, 1986). In these studies, the more persuasive feedback raised the children’s beliefs in their efficacy, and thus, the more persistent they were in their efforts and the higher the level of competence they eventually achieved. Translated to a work context, employees may be persuaded by colleagues and leaders that they possess the capabilities to achieve what they seek. Indeed, one of the most effective means for a leader to use verbal persuasion is through the Pygmalion effect. The Pygmalion effect is a form of self-
fulfilling prophecy, in which, believing something to be true can result in acting in such as to make it, or guarantee that it comes true. In fact, research by Eden (2003) has indicated that when leaders are confident that their followers can successfully perform a task, the followers perform at a higher level. Nevertheless, the power of persuasion is contingent on the leader’s credibility, previous relationship with the followers, and the leader’s influence in the organization (2003). In order to have an impact it is crucial that the feedback is perceived as authentic. It also has a stronger effect if the support comes from a significant other. The combination of receiving verbal reinforcement and passing a task that has increased in complexity can enhance self-efficacy. An employee can also be convinced that success is fully achievable if the employee has not encountered situations where the employee is unlikely to succeed (Malone, 2001). However, studies reveal that it’s easier to weaken self-efficacy through negative evaluations than to strengthen it through positive encouragement (Pajares, 2001; Shea, 1999).

**Somatic indicators: Physiological and emotional state**

In judging their capabilities, people also rely on somatic information conveyed by psychological and emotional states. Somatic indicators of personal efficacy are especially relevant in domains that involve physical accomplishments, health functioning, and coping with stressors (Bandura, 1997). Thus, studies reveal that the fourth major way of altering efficacy beliefs is to enhance physical status, reduce stress levels and negative emotional tendencies, and correct misinterpretations of bodily states (Bandura, 1991a, Cioffi, 1991). For example, negative thoughts and fears about an ability can itself lower self-efficacy. Transferred to a work context, employees who are stressed and anxious may tend to attribute these conditions to the task they have at hand. This can lead to a sense of failure that results in a decrease in their confidence in their ability. Yet, because individuals have the capacity to change their way of thinking and feeling, a heightened self-efficacy, conversely, can powerfully influence their physiological states. Another way to increase self-efficacy is to improve the physical and emotional well-being of an individual and to mitigate their negative emotional states (Bandura, 1997).

**Summary and critique of research on efficacy information**

One’s efficacy beliefs appears to be constructed through a complex process of self-persuasion. Bandura (for example 1982, 1986, 1997) states that efficacy beliefs are the product of cognitively processing of diverse sources of efficacy information that are conveyed enactively, vicariously, socially, and psychologically. As stated, several researches have addressed these issues by investigating the diagnostic factors unique to each of the four major modalities of influence (see previous paragraphs). However, as Bandura pointed out (1997), in forming their efficacy judgements, individuals not only have to deal
with different configurations of efficacy relevant information conveyed by a
given modality, but also have to weight and integrate efficacy information
from these diverse sources. However, there has been little research on how
individuals process multidimensional efficacy information. For convenience,
most of the research in this field examines the covariation of only a few fac-
tors and relies heavily on hypothetical scenarios. Thus, questions arise re-
garding the generalizability of findings from placid hypothetical situations to
real situations that are emotionally involving, psychologically taxing, and
socially consequential. In this thesis the author adds to the understanding of
the complexity of these processes by not only studying the cognitive aspects
of self-efficacy but also including their social and emotional dimensions, and
their mediating and moderating effects.

Self-efficacy at work
Self-efficacy theory provides explicit guidelines on how to enable people to
exercise some influence over how they live their lives. Research demon-
strates that efficacy beliefs influence the courses of actions that people
choose to pursue, the goals and commitment they set for themselves, how
much effort they invest in their activities, the outcomes they expect their
efforts to produce, and their resilience to adversity (Schunk, 1981; Schunk &
Hansen, 1985; Schunk, Hanson, & Cox, 1987). The higher the self-efficacy,
the greater the effort, persistence, and resilience. Efficacy beliefs also influ-
ences the quality of an individual’s emotional life - for example, it may in-
fluence how much stress and anxiety individuals experience when they en-
gage in a specific activity (Pajares & Miller, 1994), and the choices they make
in their life. Individuals with high self-efficacy often perceive troubles as
challenges to overcome, display commitment to the activities they carry out,
invest more time and effort in their daily activities, think strategically to
solve difficulties, recover more easily from failure, feel they are in control of
the majority of stressors, and feel they are less vulnerable to stress and de-
pression (for an overview see Bandura, 1992). In sum, there is a substantial
body of evidence that supports the positive impact of self-efficacy in a wide
variety of domains (for an overview see Bandura, 1997). However, in recent
years researchers have begun to pay more attention to a dark side of self-
efficacy - for example, overconfidence. This will be highlighted at the end of
this conceptual framework.
In the work context, self-efficacy is an important antecedent of motivation
because studies show that individuals high in self-efficacy are more optimis-
tic and certain about being able to reach goals by applying their knowledge
to specific tasks (Bandura, 1986, 1997; Chen, Goddard, & Casper, 2004).
Stajkovic and Luthans (1998) conducted a meta-analysis of 114 studies and
found that high self-efficacy was related to high levels of work-related performance \((r = .38)\). Indeed, according to Bandura (1997) self-efficacy is positively related to important organizational outcomes due to the fact that efficacy beliefs influence the employees’ choices of goals and goal-directed activities, emotional reactions, and persistence in the face of challenges and obstacles. This means that self-efficacy determines the employees’ selection of activities or challenges that they believe they can successfully accomplish. Typically, employees will choose to enter into a situation in which their performance expectation is high and avoid a situation in which they anticipate the demand will exceed their capability. When goals are self-set, individuals with high self-efficacy set higher goals than individuals with low self-efficacy (Locke & Latham, 2002). Employees low in self-efficacy will also often have low aspirations and weak commitments to the goals they choose to pursue (Bandura, 1997). Locke and Latham (2002) suggest that goal-setting and self-efficacy complement each other in the work context. When a leader sets difficult goals for followers, this leads followers to have a higher level of self-efficacy, and also leads them to set higher goals for their own performance. Why is this so? Locke and Latham’s (2002) research has shown that setting difficult goals for followers communicates confidence in them.

Schaubroeck and Meritt (1997) suggest that organizations may focus on increasing self-efficacy as a way to overcome the negative outcomes associated with low self-efficacy. Studies have found that high self-efficacy promotes prosocial orientation, cooperation, helpfulness, and an interest in the welfare of others (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bandura, Caprara, Barbaranelli, Gerbino, Pastorelli, 2003). Individuals with high self-efficacy are reported to have lower levels of perceived stress (Bandura, Reese, & Adams, 1982; Bandura, Taylor, Williams, Mefford, & Barchas, 1985), whereas in the work context low self-efficacy has been related to high levels of depression and anxiety (Bandura, 1997). High self-efficacy is also reported to predict jobs satisfaction and buffer the adverse effects of work-related stressors on well-being (Jex & Bliese, 1999; Stetz et al., 2006).

### Different dimensions of work-related self-efficacy

Given the centrality of efficacy beliefs in employees’ working lives, a sound assessment of this factor is crucial to understand and predict human behaviour. People differ in the areas in which they develop their self-efficacy and the degree to which they develop it. Hence, as stated in the previous paragraphs the efficacy beliefs system is not a global trait, but a differentiated set of self-beliefs linked to distinct realms of functioning (Bandura, 1997).

In the Western world, various skills are required to enter the labour market (Bayon, 2003; De Nanteuil, 2002; Medgyeski, 1999). These differentiate into generalized skills, such as cognitive abilities (e.g. ability to find solu-
tions, and make decisions), relational abilities (e.g. knowing how to interact with others), and emotional abilities (e.g. managing your own and others’ emotions), and other more specialized technical skills (Luciano, 1999; Reyneri, 2005). Work life is increasingly diversified and challenging and, through self-management, more often affords greater personal control. Some employees, change their work roles through promotion to progressively higher job assignments. Still, most of the work that employees do requires some degree of cooperation and communications with others, some kind of team-work.

When there is little prospect of upward mobility, work enrichment by job rotation that provides variety and new challenges that can be used as means to sustain the interest and involvement of employees in their work. A team-work approach is often employed for this purpose. Rather than segmenting a job into detached parts that become the sole work assignment for individuals’ day in and day out, the entire job is performed by self-managed team members. In team-oriented projects and production systems, each member learns every aspect of the job and rotates among the different subtasks (Brav, Andersson, & Lantz, 2009). A team-work approach is also used in many other areas, such as in organizations where the complexity of new products and reduced life cycle of new products makes team-work a necessity. This type of organizational structure creates an enabling work environment that is well suited for producing a highly skilled flexible workforce (Levi & Slem, 1995).

Within the work domain, tasks such as engaging in social interactions and handling emotionally demanding situations are numerous. Accordingly, it is reasonable to expect that believing in one’s own capability to deal with these social and emotional situations at work becomes vital and has an impact on health and well-being. However, most research on self-efficacy in organizations has either used general self-report measures, or, has focused on cognitive and task-oriented aspects of self-efficacy (i.e. occupational self-efficacy). Other measures of self-efficacy are needed to gain a broader understanding of the construct. This thesis adds to the theory of self-efficacy at work by investigating the social and emotional dimensions of self-efficacy. The next section gives an overview and description of occupational (cognitive), social and emotional self-efficacy. Appendix A gives an overview of the previous concepts used for occupational, social and emotional self-efficacy.

**Task-oriented cognitive self-efficacy**

A great deal of professional work involves making judgements and solving problems by drawing on one’s knowledge and applying decision procedures. Competency in problem solving requires the development of thinking skills for how to seek and use information to solve problems. In organizational research general self-efficacy has been shown to directly relate to job satisfaction (Judge & Bono, 2001) and performance (cf. Judge & Bono, 2001; Stajkovic & Luthans, 1998). The concept of occupational self-efficacy deals
with self-efficacy as a domain-specific assessment on an intermediate level and refers to the competence that employees feel concerning their capability to successfully complete their work tasks. The interest in occupational self-efficacy intensified in the early 2000s and Schyns and Collani differentiated a set of self-beliefs at work and developed an Occupational Self-efficacy Scale (OCCSEFF) in 2002. This general work-related instrument proved to be a reliable one-dimensional construct primarily capturing cognitive tasks. Schyns and Collani also presented a shorter form of the scale (OCCSEFF-8) that showed good measurement characteristics and Rigotti et al. (2008) introduced an even shorter version (OCCSEFF-6) that was tested across five countries (Germany, Sweden, Belgium, United Kingdom, and Spain). This version was used for Study II in this thesis. Other studies have shown that occupational self-efficacy is positively related to organizational outcomes such as job satisfaction and commitment (Schyns & Collani, 2002; Rigotti, et al., 2008), and negatively related to psychological strain in work contexts (Mohr, et al., 2006).

**Social self-efficacy at work**

Work is not entirely a private matter. It is an interdependent activity that structures a good portion of people’s social relations. The degree of social interconnectedness in a workplace is another aspect of work that affects people’s well-being. Career pursuits require more than the specialized knowledge and technical skills of one’s trade. Success on the job rests partly on self-efficacy in dealing with the social realities of work situations, which is often a crucial aspect of occupational roles. Technical skills can be learned readily, but psychosocial skills are more difficult to develop and often even more difficult to modify if they are dysfunctional (Bandura, 1997).

Social relationship quality has been shown to play an important role in determining employees’ work experiences (e.g. Liden, et al., 2000; Liu, Nauta, Spector, & Li, 2008; Scott & Judge, 2009), and there are also increasing social interaction demands in workplaces (Ilgen & Pulakos, 1999). For example, to perform effectively employees often need to present thoughts and results to others, participate in social groups, or seek or offer help (Fan, et al., 2012). Social self-efficacy at work is an employees’ confidence in their capability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships (Smith & Betz, 2000). Employees with high social self-efficacy are apt to develop and maintain good relationships with others in the organization. They are likely to be liked and accepted by their co-workers, and their co-workers are less likely to mistreat them, and more likely to help them at work (Fan et al., 2012).

Many studies of social self-efficacy have focused on children or adolescents (e.g. Bandura, et al., 1996; Connolly, 1989) rather than adults. There are some adult social self-efficacy measures (see Appendix 1), but most of
them tend to be either psychometrically problematic like the Social Self-Efficacy subscale of the Generalized Self-Efficacy Scale (SSE, Sherer et al., 1982,) with often less than optimal coefficient αs, around .70, or are conceptually too narrow; like the Social Skills Subscale of the Skills Confidence Inventory (SSCI, Betz, Harmon, & Borgen, 1996). One adult social self-efficacy measure for general use, for which several empirical studies have demonstrated excellent psychometric properties (e. g. Lin & Betz, 2009; Smith & Betz, 2000; Xie, 2007), is the Scale of Perceived Social Self-efficacy (PSSE). Items in PSSE cover broad social interactions as making friends, social assertiveness and performance in public situations and strong negative relationships to social anxiety and shyness have been found to be related to PSSE scores.

However, because PSSE was not designed specifically to measure social self-efficacy in the workplace Fan et al. (2012) proposed a construct of Workplace social self-efficacy (WSSE, se Appendix A). Factor analyses established a four-factor structure: (a) participating in social groups and gatherings, (b) performance in public contexts, (c) conflict management, and (d) seeking and offering help, which all had coefficients above .80. WSSE scores were found to be positively correlated with scores in job-related affective well-being, co-worker-rated popularity (e.g. being generally accepted by one’s peers) and interpersonal organizational citizenship behaviors’ (OCB-1) above and beyond PSSE scores. This suggests that the WSSE scale is a better fit to work environments compared to the more general measure of the PSSE scale. Nevertheless, the WSSE is a rather long (22 items) and is noticeably task-specific measure (for example it includes several questions about project work), which means that for many professions and jobs it is not suitable. Since the aim of this thesis was to investigate social self-efficacy at work for employees in a variety of work contexts, an Occupational Social Self-efficacy Scale on an intermediate level had to be developed and tested.

**Emotional self-efficacy at work**

Emotional experiences are heavily embedded in interpersonal transactions. In manoeuvring through intensely emotionally arousing situations, people have to take charge of their inner emotional life by regulating their expressive behaviour and strategically managing their means of coping. Earlier studies have shown that those who believe they can exercise some measure of control over their emotional life are more successful in their self-regulatory efforts than individuals who believe they are at the mercy of their emotional states (Bandura, 1997, 1999a; Sanderson, Rapee, & Barlow, 1989). Emotional self-efficacy is an individual’s belief in his or her capability to understand and use emotional information (Bandura, 1997). Furnham and Petrides (2003) argued that people with strong emotional self-efficacy are in touch with their feelings to a greater extent than are others (see also
Petrides, Fredrickson, & Furnham, 2003). A strong belief in one’s own capability to adequately respond to others’ feelings and needs, as well as to cope with interpersonal relationships, has been proved to be critical for promoting successful adaption and well-being (Di Giunta, et al., 2010).

High emotional and empathic self-efficacy has been shown to make it easier to engage oneself with empathically with others’ emotional experiences and resist social pressure to engage in antisocial activities (Bandura et al., 2003). Perceived empathic self-efficacy may function as a significant mediator, as it was found that adolescents with a high sense of empathic efficacy in relation to the emotional lives of others were more prosocial in their relationships. Empathic self-efficacy was viewed not simply as a reactive process of cognitive perspective taking, but rather as active participation in the emotional life of others. In Study I for this thesis, we continued to investigate the possibility that emotional- and empathic self-efficacy may work as antecedents of prosocial behaviour for adolescents in a school context. The definition used for empathic self-efficacy is based on Batson’s notion of empathy in terms of special feelings of compassion. The aimed was to examine the relation between emotional- (self-oriented) and empathic (other-oriented) self-efficacy and prosocial behaviour. Study I can be seen as preparatory and eye-opening in that the results in the school setting encouraged further investigations of different dimensions of self-efficacy in a work context.

In a work context, belief in one’s capability to regulate emotions has been shown to be important within the service-oriented labour market. Heuven, et al., (2006) highlighted the role of self-efficacy in emotionally demanding work. They revealed that emotion work-related self-efficacy buffered the relationship between emotional job demands and emotional dissonance (a discrepancy between felt and displayed emotions), and the relationship between emotional dissonance and work engagement. Self-efficacy in regulating negative emotions has been reported to decrease depression (Bandura, et al., 2003; Caprara, Steca, Cervone, & Artistico, 2003), whereas self-efficacy in expressing positive emotions has been associated with well-being (Caprara, Steca, Gerbino, Paciello, & Vecchio, 2006). On the other hand, Bandura et al., (2003) found that empathic self-efficacy in adolescent females increased vulnerability to depression over time. Thus, to the extent that some of the experiences have distressing features, personalizing distress of others can take an emotional toll on empathizers (Bandura). Can this vulnerability also be found in a work context? For this thesis there was an interest to continue to investigate the dark side of self-efficacy at work. In Study III we therefore explored whether individual differences (i.e. low/high emotional self-efficacy) acted as a moderator for a crossover effect of emotional exhaustion from followers to leaders. We wanted to investigate if leaders with high emotional self-efficacy were more vulnerable to crossover of emotional exhaustion from followers than leaders with low emotional self-efficacy.
Emotional self-efficacy related to oneself and to others

Kirk, Schutte and Hine (2008, 2009, 2011) developed and validated a one-dimensional measure of emotional self-efficacy (ESES), building on research in both the areas of emotional intelligence and self-efficacy, but clearly separating the two constructs (cf. Petrides and his colleagues, 2001, 2006, 2007). Emotional intelligence has been conceptualized as an emotion related cognitive ability to perceive, use, understand, and regulate emotion (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004) and emotional self-efficacy has been viewed as the belief in this ability (Bandura, 1997). Dacre Pool and Qualter (2012) established a multidimensional structure of the ESES that primarily showed a distinction between confidence in emotional functioning related to oneself and to others. Choi, Kluemper and Sauley (2012) used a shorter version (ESES-24) and also found this distinction to some extent. However, studies conducted thus far in work organizations have neither investigated self- nor other-oriented emotional self-efficacy. Consequently, since the aim of this thesis was to investigate emotional self-efficacy at work for employees in a variety of work contexts, an Occupational Emotional Self-efficacy Scale on an intermediate level, with a distinction between self- and other-orientation, needed to be developed and tested.

The role of self-efficacy and leadership in the JD-R theory

For this thesis the Job Demand-Resource (JD-R) theory provided a useful theoretical framework for investigating self-efficacy in relation to leadership and well-being. According to this theory (for an overview see Bakker & Demerouti, 2014), wellbeing is determined by two types of work characteristics: job demands and job resources. Job demands are conceptualized as the characteristics of a job requiring sustained effort or skills, while job resources involve aspects of a job that facilitate goal achievement, reduce demands and/or enhance personal development (Bakker & Demerouti, 2007). The JD-R theory hypothesizes two different processes both of which can affect well-being (Bakker & Demerouti, 2007). First, according to the health impairment process, badly designed jobs or chronic job demands can result in an exhaustion of employees’ job resources which can make them feel depleted of energy and cause health problems (Bakker, Demerouti, & Euwema, 2005; Bakker & Demerouti, 2007). The second process, the motivational process, proposes that job resources have a motivating effect, stimulating high work engagement and performance (Bakker & Demerouti, 2007, Bakker & Demerouti, 2008). Thus, the former process potentially threatens the individual’s well-being while the latter may promote it (Bakker et al., 2005). Besides these two processes, job resources have been proposed as a buffer to the relationship between job demands and job strain so that high job resources can compensate for high job demands (Demerouti et al., 2001). Finally, it has been hy-
pothesized that poor job resources may result in elevated strain levels (Schaufeli & Bakker, 2004).

Empirical findings support the JD-R theory and the two processes related to strain and motivation: Job demands have been found to relate to enhanced levels of emotional exhaustion (Bakker, Demerouti, & Verbeke, 2004; De Jonge et al., 2001) whereas enhanced levels of job resources have been associated with increased work engagement (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli & Bakker, 2004). This is consistent with meta-analytical findings (Crawford, et al., 2010).

Self-efficacy in the JD-R theory
Bakker and Demorouti (2008) expanded the JD-R theory by proposing that personal resources (i.e., optimism, self-efficacy, resilience and self-esteem) can mobilize job resources, enhance work engagement, and improve performance and organizational outcomes. Self-efficacy may determine the way employees perceive existing job demands and available job resources which, in turn, may have an effect on their levels of well-being. Those who have high levels of self-efficacy might be more capable of selecting, altering, and implementing their other resources to meet stressful demands (Gorgievski, Halbesleben, & Bakker, 2011; Hobfoll, 2002). For example if you feel socially competent (social self-efficacy) you will not perceive having to work with people who see things differently than you as a demanding threat (job demand), and this can have an positive effect on well-being. Thus, self-efficacy can be considered a key personal resource to understand employees’ behaviour, as well as the antecedents and consequences of this behaviour (Bandura, 1986, 1997, 2001, 2009). Key resource theory generally focuses on single or multiple individual difference variables (resources) that are considered key for the effective adaptation and management of the demands of life.

Hence, in line with the JD-R theory, the role of self-efficacy as an important personal resources in the work context (Heuven, et al., 2006) is investigated in this thesis. Especially on a (proposed) positive motivational process like work engagement which is investigated in Study III. Work engagement is “a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption” (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). Vigour is characterized by high levels of energy and mental resilience, the willingness to invest effort, and persistence even in the face of difficulties. A sense of significance, enthusiasm, inspiration, pride, and challenge characterize dedication. Finally, being fully concentrated and deeply engrossed in one’s work whereby time passes quickly and one has difficulties with detaching oneself from work characterize absorption. Evidence, however, suggests that absorption plays a slightly different role and may
perhaps be considered a consequence of work engagement rather than a constituting component (Salanova, Llorens, Cifre, Martinez, & Schaufeli, 2003). Therefore the core dimensions *vigour* and *dedication* are used in this thesis.

**Leadership in the JD-R theory**

Consistent with the JD-R theory, supportive leaders are often regarded as a resource for followers, fostering their optimism and work engagement (Tims, et al, 2011), and reducing perceived stress and emotional exhaustion (Thomas & Lankau, 2009). In Study IV this follower perspective is used. However, in Study III, the lens were reversed, and how followers influenced their leaders’ psychological well-being and strain was examined. It was hypothesized that within the framework of the JD-R model (Bakker & Demerouti, 2014), social interactions with followers can pose a considerable resource, or a work demand, for leaders, affecting their experience of well-being and strain. More specifically, cross-over of work engagement and emotional exhaustion from followers to leaders was examined. It was expected that follower’s level of emotional exhaustion would pose a job demand or social work stressor for their leaders who, being exposed to this stressor, develop higher emotional exhaustion over time. In addition, work engagement was expected to act as a social resource for leaders, resulting in higher levels of leader work engagement over time.

**Self-efficacy as an important capacity in the work place**

In line with the JD-R theory (Bakker & Demerouti, 2014) viewing self-efficacy as an important personal resource, researchers within the field of Positive Organizational Behaviour (POB) (Luthans, 2002a, 2002b, 2003, Luthans, Youssef, & Avolio, 2007; also see Nelson & Cooper, 2007; Wright, 2003) state that self-efficacy is an important capacity in the work place. POB and its derivative psychological capital or PsyCap (Luthans, Avolio, Avey, & Norman, 2007; Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2004, Luthans et al., 2007) is largely drawn from theory and research in positive psychology (Peterson & Seligman, 2004; Seligman & Csikszentmihalyi, 2000; Snyder & Lopez, 2002) applied to the workplace (Luthans & Youssef, 2007). Positive psychology is concerned with individual’s strengths (rather than weaknesses and dysfunctions) and how they can grow and thrive (rather than be fixed or maintained). One of the most interesting findings to come from the study of positivity is that being positive is not merely something with which you are born. This is aligned and consistent with what positive organizational behaviour researchers have been suggesting. They believe that capacities such as optimism, hope, confidence (i.e. self-efficacy) and resilience are not only important to the delivery of important workplace outcomes, but they can be learned. POB is defined as “the study and application of positively oriented human resource strengths and psychological capacities
that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002b, p. 59). Self-efficacy arguably meets the POB criteria better than any other capacity is self-efficacy (Luthans, 2002a, 2002b, 2003, Luthans & Yousef, 2007. Luthans, Youseff et al., 2007). In the empirical studies II and IV of this thesis, social self-efficacy is investigated as an important capacity for the positive work outcome team climate, a construct related to well-being.

Investigating self-efficacy in relation to leadership, health and well-being

According to the Luxembourg declaration (2007), organizations need to promote health and well-being in the workplace, but there is no consensus about what methods or interventions should be used to achieve this complex goal. More recently there have been several studies indicating that a focus on leadership development could be considered as an effective option for interventions (cf., Kelloway & Barling, 2010). Training efforts using supportive leadership behaviour, such as providing contingent positive feedback, have for example proved to be effective in building self-efficacy (Bandura, 1997; Gist, & Mitchell, 1992). In focus for my thesis is to develop the theory of self-efficacy at work by investigating work-related social, emotional, and cognitive dimensions of self-efficacy in relation to leadership, health and well-being.

Self-efficacy and transformational leadership

For Study IV, the theory of transformational leadership was particularly helpful because it considers the relation between leader and follower as an interaction (Bass & Riggio, 2006). Transformational leadership is generally defined in terms of the leader’s behaviours and its effects on followers (Dvir & Shamir, 2003). Idealized influence, inspirational motivation, intellectual stimulation and individualized consideration characterize a transformational leader. A recent review, (e.g. by Skakon, Nielsen, Borg & Guzman, 2010) clearly indicated that transformational leadership behaviour seems to be related to followers health and well-being.

Some authors affirm that transformational leaders enhance followers’ self-efficacy by emphasizing positive visions, communicating high performance expectations, adequate feedback, and expressing confidence in followers’ abilities to contribute to the mission and goals of their organization (Avolio, Zhu, Koh, & Bathia, 2004; Turner, Barling, and Zacharatos, 2004). Thus, a transformational leader may increase follower’s efficacy through mastery experience, modeling (vicarious experience) and verbal persuasion, three of the major sources of self-efficacy (Walumbwa, Avolio, & Zhu, 2008; Salanova, Lorente, Chambel, & Martines, 2011). With self-concept-
based theory, Shamir, House and Arthur (1993) advanced transformational leadership research by outlining the motivational processes linking leaders and their followers. In this self-concept theory, there are three key ways in which transformational leaders motivate followers: by increasing followers self-efficacy, by facilitating followers’ social identification with their group, and by linking work values to follower values, thus increasing the extent to which followers view their work as self-expressive.

Research on the predictive power of transformational leadership on self-efficacy shows mixed results. Schyns (2001) found high correlations between transformational leadership and work-related self-efficacy (occupational self-efficacy), but due to the cross-sectional nature of this study it was not possible to draw conclusions on the direction of the relationship. In addition, in an extension of this study Felfe and Schyns (2002) failed to replicate the findings that transformational leadership predicted occupational self-efficacy. On the other hand, Walumbwa et al., (2008) revealed that self-efficacy partially mediated the positive effects of transformational leadership on performance. Salanova et al., (2011) found that transformational leadership contributed significantly to individual well-being (in this study, work engagement). In addition, of particular value was the fact that the study showed that the relationship was partially mediated by the impact of leaders’ behaviour on followers’ self-efficacy. Nevertheless, such research is scarce because most of the research that has been conducted has primarily focused on the outcomes of efficacy beliefs. Therefore, less is known about the possible antecedent variables related to efficacy beliefs. In order to obtain a more in-depth understanding of the role of self-efficacy in organizations, this thesis not only investigated how self-efficacy affects organizational health and well-being outcomes is investigated, but also how additional variables such as leadership style, may influence it. Consequently, the aim of Study IV was to investigate both synchronous and longitudinal relationships between follower perception of transformational leadership and team climate, as well as the mediating effects of work-related social self-efficacy.

The dark side of self-efficacy

Decades of empirical research has generated a large number of studies that demonstrate positive relationships between self-efficacy at work and different motivational and behavioural outcomes in several settings (Stajkovic & Luthans, 1998, Latham, 2005 etc.). Thus, previous studies conclude that high levels of efficacy beliefs relate to positive and desired outcomes, such as good work performance, positive attitudes and satisfaction. Yet the question remains as to whether the consequences of high levels of self-efficacy are always desirable? That is, whether the relationship between efficacy beliefs and performance is always positive (i.e. the higher self-efficacy, the better
the behaviour and performance), or could these consequences not be desirable or negative under certain conditions?

**Self-efficacy, sound appraisals and overconfidence**

People make judgements of their efficacy because these judgements serve functional purposes. Acting on sound appraisals of personal capabilities increases the prospect of success, whereas acting on misjudgements of what one can do may be costly to one’s psyche, cash flow, and fragile body. Nevertheless, people usually possess many of the basic sub-skills for adaptive performances and if some of the subskills are lacking, this does not mean that efficacy beliefs can do nothing. Through proactive exercise of efficacy belief in self-development, capacity is converted to capability (Bandura, 1997). However, a number of conditions can create disparity between efficacy belief and action. These disparities can for example derive from deficiencies in assessment, ambiguity of task demands or performance attainments. Others disparities may violate propositions about the conditions under which thought is related to action or reflect genuine discordances between self-referent thought and action (Bandura).

The Social Cognitive Theory (SCT) affirms that self-efficacy is related to positive results (Bandura, 1997). However, what happens when self-efficacy is excessively elevated, that is, when an individual presents with excessive of confidence (overconfidence)? Will this overconfidence also be related with positive results, or, can it be related for example to risky behaviour which can lead to accidents? Individuals with high level of self-efficacy tend to interpret demands more like challenges than threats (Bandura, 1999, 2001). Bandura (1997) hypothesized that people take risks and face challenges because they believe they are capable of coping with the situation. An individual with high self-efficacy may be less likely to fear failure and thus is more likely to take reckless risks (Kontos, 2004). For this reason, an overconfident individual can interpret demands erroneously and may not always confront them in an appropriate way. In a study by Prieto et al., (2009) evidence was found that the consequences of high self-efficacy are not always beneficial or positive for individuals or groups, but rather they depend on the type of activity performed. High self-efficacy was positive in learning and innovative activities (i.e. better academic and innovative performances respectively), whereas high levels of self-efficacy in risky activities, such as building constructions, had negative consequences (i.e. poorer safety performance). These results show the importance of establishing an optimum level of self-efficacy in accordance with the setting where people perform the given activity (avoiding overconfidence and under-confidence according to the situational constraints).
Negative sides of high self-efficacy

There is, according to Bandura (1997), a substantial body of evidence that supports the view that an optimistic sense of self-efficacy fosters psychological well-being and personal accomplishments through self-challenge, commitment, motivational involvement, and nonintrusive task orientation rather than fearful self-protectiveness. Although a growing body of research attests the impact of self-efficacy on positive consequences, some researchers have focused on the dark sides of self-efficacy. For instance, Vancouver and Kendall (2006) found that high levels of self-efficacy lead to overconfidence and were also negatively related to performance and resource allocation.

In the work context, high levels of work self-efficacy have also been related to high levels of workaholism (Del Libano, Llorens, Salanova, & Schaufeli, 2012; Ng, Sorensen, & Feldman, 2007). On the other hand, job underload can be a stressor for employees with high self-efficacy. A study by Matsui and Onglatco (1992) showed that employees with high self-efficacy were stressed by their perceived underload, which was expressed in feelings of being thwarted and frustrated by the organizational constraints that limited their development and use of their potential. Also, managers with high self-efficacy have been shown to be more prone than those with low self-efficacy, to escalate commitment to unproductive ventures (Whyte & Saks, 2007; Whyte, Saks, & Hook, 1997), and to remain wedded to previously successful practices despite altered realities that place them at competitive disadvantage (Audia, Locke, & Smith, 2000).

Bandura et al., (2003) found that empathic self-efficacy (in female adolescents) increased vulnerability to depression over time. This effect was observed to the extent that experiences leaders have with their teams involving worrying aspects, such as exhaustion, personalizing the distress of others can take an emotional toll on the empathizers (Bandura et al., 2003). These results are in line with the claim that efficacy beliefs not only have positive consequences for well-being, but might also have negative consequences depending on the context and the level of analysis used (Del Libano, et al., 2012; Vanocover, Thompson, & Williams, 2001). Therefore, promoting self-efficacy in the job context does not always have to be a good strategy to improve well-being, particularly if organizations are not aware of the possibly negative role of self-efficacy (for example, also generating exhaustion), depending on the circumstances (Del Libano, et al., 2012). In Study III, the possible negative side of having high emotional self-efficacy, that is, being sensitive and vulnerable to the possible crossover of emotional exhaustion from followers to leaders is explored.
Empirical studies

This thesis includes four empirical studies (see Table 2). All, but the first study, constitute parts of the international research project RE-SU-LEAD. The research design for RE-SU-LEAD was a longitudinal intervention study with an experimental field study design, including both intervention groups and control groups, in Sweden and Germany. Data were based on standardized questionnaires which the participants filled in individually at their workplace at three different points in time: before the start of the intervention (T1), immediately after the end of the intervention (T2) and a follow up (T3), within a total time span of 22 months. On all three occasions, participants, both leaders and their followers, rated their self-efficacy, health, and well-being. In addition, followers rated their immediate manager on a variety of leadership behaviours, whereas the leaders rated themselves on the same leader behaviours.

The results of Study I, conducted in a high school setting, encouraged further investigations of different dimensions of self-efficacy in a work context. Study II is a cross-sectional study that tests and validates the new work-related Occupational Social and Emotional Self-efficacy Scales and compares them to the cognitive occupational self-efficacy scale. The in-depth studies III and IV are prospective and longitudinal. Moreover, Study III has a leader perspective whereas Study IV has a follower perspective. This section contains an overview of the studies including methods and summaries.

Methods

Participants and procedure

Study I
The sample for Study Ia consisted of 121 high school (upper secondary school) students (82 boys and 39 girls) aged 15-19 years ($M = 16.1$), in a Swedish town. Over and above the 121 students who participated, there were 23 other students in the classes who did not participate for various reasons (16 were absent due to illness, 3 arrived late, 2 declined to participate and 2 filled in the questionnaires incorrectly). The sample for Study Ib consisted of
48 high school students (15 boys and 33 girls) aged 16-19 years (M = 16.8). Among the participants, 89.4% were non-immigrants and 10.6% immigrants. The students were recruited from the same high school as in Study Ia, but from three different classes. There were 8 students who did not participate due to illness.

The procedures for Study Ia and Study Ib were the same. The students completed a questionnaire individually in their classrooms. The questionnaire began with descriptions of three fictitious situations; 1) going to a student’s home to give her or him one’s lecture notes, 2) helping a student who dropped a tray in the lunch room, 3) lending one’s telephone to another student despite risking missing a bus. Each situation was followed by a question intended to measure self-reported prosocial behaviour. Next followed statements measuring academic and emotional self-efficacy, and additional questions about prosocial behaviour.

Table 2. Overview of the studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Setting</th>
<th>Participants</th>
<th>Data analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study I</strong></td>
<td>Cross-sectional</td>
<td>Swedish High school</td>
<td>High school students (study Ia n = 211) (study Ib n = 48)</td>
<td>Pearson correlation Multiple linear regression Two-way ANOVAs</td>
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<tr>
<td>Vignette-study</td>
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<tr>
<td><strong>Study II</strong></td>
<td>Cross-sectional</td>
<td>Swedish and German organizations (n = 12)</td>
<td>Employees (n = 817, SWE = 226, GER = 591)</td>
<td>Pearson correlation Hierarchical multiple linear regression Two-way ANOVAs Confirmatory factor analyses Multi group analyses of variance</td>
</tr>
<tr>
<td>Questionnaire study</td>
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<tr>
<td><strong>Study III</strong></td>
<td>Prospective/</td>
<td>Swedish and German organizations (n = 12)</td>
<td>Leaders (T1 n = 164) (T2 n = 67) Employees (T1 n = 1661) (T2 n = 315)</td>
<td>Pearson correlation One-way ANOVAs Hierarchical multiple linear regression</td>
</tr>
<tr>
<td>Questionnaire study</td>
<td>Longitudinal</td>
<td></td>
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<tr>
<td><strong>Study IV</strong></td>
<td>Prospective/</td>
<td>Swedish and German organizations (n = 12)</td>
<td>Employees (n = 758)</td>
<td>Pearson correlation Structural equation modelling Conditional process modelling Bootstrapping</td>
</tr>
<tr>
<td>Questionnaire study</td>
<td>Longitudinal</td>
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**Study II, III and IV**

The sample for Studies II, III and IV consisted of German and Swedish employees participating in RE-SU-LEAD. A requirement for participation was
that employees worked together in teams and had frequent contact with their leaders. Therefore, organizations with a tradition of close collaboration were invited. To achieve generalizability of results, employees from 229 different teams in 12 different organizations in Sweden and Germany from a range of occupations participated. Each team had a formal leader with managerial responsibilities, and this was the manager they were asked to rate. All jobs were characterized by high service demands, customer orientation, and required regular interaction and exchange among team members (including team leaders). The German sample included both public (e.g., daycare and administration) and private sector (e.g., banking and production), whereas the Swedish sample consisted of employees in the public sector, from a diversity of branches such as city administration, elderly care, kitchen and cleaning, pre-school and schools, and social services. However, analyses proved to be complex due to large attrition for example in the Swedish control group, where there were only 21 longitudinal cases (T1-T2-T3). These problems made evaluation using the experimental field study design difficult.

**Study II**

For Study II the questionnaire data from followers from T1 was used, with statements measuring work-related social self-efficacy, self- and other-oriented emotional self-efficacy, cognitive and task-oriented (occupational) self-efficacy, team climate, emotional exhaustion and emotional irritation from followers. The criterion for inclusion was that participants had filled in all self-efficacy items, which 1692 (92.5%) did. To obtain a validation sample, the “random sample of cases” procedure in SPSS 19 was used to select approximately 50% of all cases. The other half of the cases was used for initial explorative analyses (not included in the study). The validation sample consisted of 817 employees, 226 from Sweden and 591 from Germany. The sample in Sweden consisted of 191 (85%) women and 35 (15%) men ranging in age from 23 to 66 ($M = 45.84, SD = 10.58$). The sample in Germany consisted of 456 (77%) women and 135 (23%) men. Participants in the German sample were significantly younger ($M = 40.56, SD = 10.12$), with age ranging from 19 to 64, $F(1, 809) = 42.53, p < .001$. Participants in Sweden had worked significantly shorter for the same employer ($M = 12.90$ years, $SD = 10.75$) than participants in Germany ($M = 15.12$ years, $SD = 9.09$), $F(1, 798) = 8.61, p < .001$, but the range was large in both countries. The education level tended to be lower in Sweden where about 57% of the participants had completed an education on the second highest level (first stage of tertiary upper secondary level, ISCED-97) as compared to 61% in Germany, $\chi^2(4, N = 619) = 52.49, p < .0001$. 

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Study III

For Study III, questionnaire data from followers at T1 was used, measuring emotional exhaustion, work engagement, and tenure with the leader. For leaders, statements of their self-reported emotional self-efficacy, autonomy, and work load at T1 were used as well as their emotional exhaustion, work engagement at both T1 and T2. The sample for T1 consisted of 164 leaders and 1661 followers. The response rate was 62% in Germany and 46% in Sweden. T2 for this study was eight months later, where 123 leaders and 1094 team members provided information.

After matching participants across teams and time points, and excluding those who changed roles (i.e. followers who became leaders) during data collection, the total sample was 75 leaders and 342 team members. In total, 41 leaders and 567 team members did not respond at the second point of measurement, 34 leaders and 593 team members were excluded because they could not be matched (i.e. data from either the leader or the team members were missing), 14 leaders and 158 team members were excluded because they changed their team during the study or left the organization and, finally, one team member was excluded because of a role change (promotion from follower to leader). Missing data further reduced the final sample used for analysis to 67 leaders and 315 team members.

On average a team consisted of 4.6 ($SD = 3.1$) members who had been working with their current supervisor for 4.7 ($SD = 2.4$) years. More women (followers: 82%; leaders: 64%) than men participated in the study. Team members’ average age was 43 years ($SD = 10.0$), and leaders’ was 47 years ($SD = 8.5$). There was more German (followers: 69%; leaders: 77%) than Swedish (followers: 31%; leaders: 23%) participants in the sample. Swedish participants reported more work engagement than German participants (followers: T1: $t(250) = 11.00, p < .001$; T2: $t(240) = 10.02, p < .001$; leaders: T2: $t(65) = 2.32, p = .024$). Levels of emotional exhaustion did not differ significantly between countries.

Study IV

For Study IV questionnaire data from followers at T1, T2 and T3 were used, containing items to measure self-reported work-related social self-efficacy and team climate, as well as the followers’ perceptions of their leader’s transformational leadership behaviour. The response rate for T1 was 1759 out of 2837 (62%), prospective data (both T1 and T2) were provided by 1092 participants and 817 participants filled in questionnaires at all three points in time. The criterion for inclusion was that participants had filled in all scales used for this study at all three points in time, and the final sample consisted of 758 participants from 190 different teams.

The sample in Sweden consisted of 104 participants of which 87 (84%) were women and the age ranged from 23 to 65 ($M = 45.78$, $SD = 10.60$). The
sample in Germany consisted of 654 participants of which 514 (79%) were women. Participants in the German sample were significantly younger ($M = 40.34$, $SD = 9.78$), with age ranging from 20 to 61, $F(1, 756) = 27.13$, $p < .0001$. Participants in Germany had a tendency to have worked longer in their current work group ($M = 6.80$ years, $SD = 6.53$) than participants in Sweden ($M = 5.53$ years, $SD = 6.26$), $F (1, 720) = 3.39$, $p = .066$, but the range was large in both countries. The education level was significantly lower in Sweden as measured with the ISCED 97 measure (OECD 1999) where about 42% of the participants had completed an education on the second highest level (first stage of tertiary upper secondary level) as compared to 58% in Germany, $\chi^2 (4, N = 748) = 61.28$, $p < .0001$. Drop-out analyses revealed no significant differences in age, gender, tenure, education or any of the study variables between the initial and final sample.

Measures

Table 3 presents a list of the major measures used in the four empirical studies. In all studies at least one self-efficacy dimension was included and all four studies were related to some form of health or well-being construct. Furthermore, two of the studies were related to leadership (Study III and IV). Next follows a detailed description of these measures.

Table 3
Measures included in the studies

<table>
<thead>
<tr>
<th>Measures</th>
<th>Study I</th>
<th>Study II</th>
<th>Study III</th>
<th>Study IV</th>
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<tbody>
<tr>
<td>Academic self-efficacy</td>
<td>X</td>
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<tr>
<td>Emotional self-efficacy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Social self-efficacy</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Occupational self-efficacy</td>
<td>X</td>
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<tr>
<td>Prosocial behaviour</td>
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<td>X</td>
<td></td>
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</tr>
<tr>
<td>Team climate</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Emotional exhaustion</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Emotional irritation</td>
<td>X</td>
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<tr>
<td>Work engagement</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Transformational leadership</td>
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<td>X</td>
</tr>
</tbody>
</table>

**Academic self-efficacy**

For Study Ia, 8 academic self-efficacy items from Muris (2001) multidimensional self-efficacy questionnaire for children (SEQ-C) were translated and modified into statements. Sample items are “I can prepare for an exam” and
“I do okay in all school subjects”. The statements were rated on a six-point response scale ranging from 1 (not at all) to 6 (completely). Cronbach’s $\alpha = .80$.

**Emotional self-efficacy**

**Study I**
For Study Ia, Muris (2001) 8 questions to measure self-oriented emotional self-efficacy from the multidimensional self-efficacy questionnaire for children (SEQ-C), were translated and modified into statements. A sample item is “I can handle my feelings” and statements were rated on a six-point response scale ranging from 1 (not at all) to 6 (completely). Due to low internal consistency (Cronbach’s $\alpha = .54$) the items “I have difficulty forgetting unpleasant things that have happened” and “I worry about things that might happen”, were excluded resulting in Cronbach’s $\alpha = .71$.

For Study Ib, six other-oriented items based on the empathy adjectives compassionate, moved, soft-hearted, sympathy, tender, and warm on Batson’s (Batson, Early, & Salvarani, 1997) empathy scale were added to the emotional self-efficacy scale, with the same response scale. A sample item is “I feel sad when I see that another student is being bullied”. Altogether the emotional self-efficacy scale included 14 items, of which eight were self-oriented and six other-oriented. Cronbach’s $\alpha$ for all 14 items was .79, for the self-oriented items .71, and for the other-oriented .86.

**Study II and III**
Because Study II was conducted in a work context and there were no appropriate scales, the Occupational Emotional Self-efficacy Scale with eight items, was developed and tested. This scale was also used in Study III. The Occupational Emotional Self-efficacy scale measures employees’ confidence in their capability to perceive, understand, regulate, and use emotional information at work. A focus on the work context as well as a distinction in self- vs. other-oriented emotions (cf. Choi et al., 2013), guided the development of this scale. Banduras definition of general emotional self-efficacy (1997) was adapted to suit the workplace domain resulting in occupational emotional self-efficacy defined as: an employee’s confidence in his or her capability to perceive, understand, regulate and use emotional information at work. This definition, Banduras guide for construction self-efficacy scales (2006) and the general emotional scale (ESES, Kirk et al., 2008) was used as a starting point for developing an initial pool of items. Items that did not meet the following inclusion criteria were then screened out: (a) the item is clearly worded and easy to understand, (b) the specific emotional task is relevant to the definition, (c) the item is applicable to a work context and (d) the emotional situation in the item is commonly experienced in many organizations. Consulting experts familiar with self-efficacy theory and research
in work life psychology the following inclusion criteria was used next, for screening the items, (a) items from all four facets from emotional intelligence (perceiving, understanding, regulating and using emotions) should be represented, (b) items focusing solely on negative emotions should be included with the argument that these would be most relevant for the emphasis on developing healthy organizations, (c) building on previous research (Choi et al., 2012; Dacre Pool & Qualter, 2012) showing a distinction between confidence in emotional functioning related to oneself and to others both self-oriented and other-oriented items should be included for each of the four facets. Finally, the Occupational Emotional Self-efficacy Scale for this Study included eight items, of which four were self-oriented and four other-oriented. The translation process for this scale followed the same procedure as for the Occupational Social Self-efficacy Scale and the introduction and response continuum was also the same. Because the concept of self-efficacy expectations itself refers to confidence in one’s capability to engage in specific behaviour, the following 5-level confidence scale are used: 0 (No Confidence at all), 1 (little Confidence), 2 (Moderate Confidence), 3 (Much Confidence), and 4 (Complete Confidence). See all items (12-19) in Appendix B. Cronbach’s α Study II = .85 and Study III = .81.

Social self-efficacy

Study II was conducted in a work context and because there were no suitable scales, the Occupational Social Self-efficacy Scale with five items, was developed and tested. This scale was also used in Study IV. The scale measures employees’ confidence in their capability to engage in the social interactional tasks necessary to initiate, maintain and develop interpersonal relationships at work. Smith and Betz’ (2000) definition of general social self-efficacy was adapted to suit a work context, and a focus on development was added resulting in the following definition: An employee’s confidence in her or his capability to engage in the social interactional tasks necessary to initiate, maintain and develop interpersonal relationships at work. The authors generated an initial pool of items based on this definition, Bandura’s guide for constructing self-efficacy scales (2006) and following Smith and Betz work with the general scale of perceived social self-efficacy (PSSE, 2000). The items covered the following areas of social interactions; making friends, performance in groups, receiving help, and social assertiveness. Aspects of conflict management were added because such situations are a potentially important element of the workplace social domain. Consulting experts familiar with self-efficacy theory and research in work life psychology, modifications and reduction of items followed. One of these experts was a developer of PSSE. Items that did not meet the following inclusion criteria were screened out: (a) the item is clearly worded and easy to understand, (b) the specific social task is relevant to the definition, (c) the item is applicable to a
work context and (d) the social situation in the item is commonly experienced in many organizations. This resulted in six remaining items that were first formulated in English and then translated to Swedish and German by native speakers. These versions were back-translated to English by a native English speaker. The translation process resulted in further modifications, and one item was deleted because criteria (c) and (d) were not met in Germany. Thus, the Occupational Social Self-efficacy Scale included five items. The items are rated on the same 5-point Likert-type scale as for the Occupational Emotional Self-efficacy Scale. See all items (7-11) in Appendix B, Cronbach’s α Study II = .87, and Study IV, T1 = .86, T2 = .78, T3 = .82

**Occupational self-efficacy**

For Study II the short version of the Occupational Self-efficacy Scale (Rigotti et al., 2008) with six items, was used to examine the convergent and predictive validity of the Occupational Emotional- and Occupational Social Self-efficacy Scale. The Occupational Self-efficacy Scale is a task-oriented cognitive scale. The items are rated on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). A sample item is “When I am confronted with a problem in my job, I can usually find several solutions”. Cronbach’s α = .79. See all items (1-6) in Appendix B.

**Prosocial behaviour**

For Study I, eight of Romano, Tremblay, Boulerice and Swishers (2005) items to measure prosocial behaviour in children were translated into Swedish and modified to suit the present research. A sample item was: “I offer to help other students who are having difficulty with a task”. To those eight items, three prosocial behaviour questions about the three fictive situations were added. All eleven statements were rated on a scale from 1 (not at all) to 6 (completely). Cronbach’s α = .91.

**Team climate**

A short 14-item version of the Team Climate Inventory (TCI; Anderson & West, 1994) developed and tested by Kivimäki and Eloainio (1999) was used to measure team climate in Study II and IV. The scale assesses the four sub-dimensions; participatory safety, support for innovations, task orientation and vision. It demonstrated internal homogeneity, reliability and normality across two large independent samples and acceptable predictive validity compared to the original TCI (Kivimäki & Eloainio). The items are rated on a 5-point response scale ranging from 1 (to a very small extent) to 5 (to a very large extent). Sample items are: “People in the work unit feel understood and accepted by each other” and “People in the work unit cooperate to help develop and apply new ideas”. Cronbach’s α for Study II = .92, and for Study IV, T1 = .91, T2 = .92, T3 = .95.
Emotional exhaustion
For Study II and III, emotional exhaustion was measured using the three items with highest factor loading of the Maslach Burnout Inventory (c.f Kinunen, Mäkikangas, Mauno, De Cuyper, & De Witte, 2014). A sample item is “I feel emotionally drained from my work” (Maslach, Jackson, & Leiter, 1996). The statements were rated on a 7-point response scale ranging from 0 (never) to 6 (every day). Cronbach’s α for Study II = .81, and for Study III for leaders = .82 and followers = .81.

Emotional irritation
For Study II, the 5-item version of the Emotional Irritation Scale developed by Mohr et al. (2006) was used to measure emotional irritation. A sample item is “I get irritated easily, even when I don’t want to“, and the statements were rated on a 7-point response scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s α = .83.

Work engagement
For Study III, work engagement was assessed using six items measuring the core dimensions vigor and dedication from the Utrecht Work Engagement Scale. Sample items are: “At my work, I feel that I am bursting with energy” and “I am enthusiastic about my job” (Schaufeli & Bakker, 2003). The statements were rated on a 7-point response scale ranging from 0 (never) to 6 (every day). Cronbach’s α for leaders = .92 and followers = .93.

Transformational leadership
For Study IV, transformational leadership was measured using the Global Transformational Leadership Scale (GTLS; Carless, Wearing, & Mann, 2000). It consists of seven items and has been found to have a high degree of convergent validity with more established and lengthier questionnaires such as the Multifactor Leadership Questionnaire (MLQ: Avolio, Bass, & Jung, 1995) and the Leadership Practices Inventory (LPI; Kouzes & Posner, 1990). It assesses the four sub-dimensions of transformational leadership: Inspirational motivation, idealized influence, intellectual stimulation, and individual consideration. Previous research has demonstrated these sub-dimensions to be highly interrelated (c.f. Judge & Piccolo, 2004) and in line with other research (Liaw, Chi, & Chuang, 2010), study IV utilizes the total score for the construct. Sample items are: “My leader communicates a clear and positive vision of the future” and “My leader encourages thinking about problems in new ways and questions assumptions”. The statements were rated on a 7-point response scale ranging from 1 (to a very small extent) to 5 (to a very large extent). Cronbach’s α, T1 = .94, T2 = .95, T3 = .95.
Ethical considerations

The four studies were conducted in accordance with good research practice, which means that fundamental principles of information about the research, informed consent, and confidentiality were taken into account (Vetenskapsrådet, 2011). For Study I the participants were recruited out of convenience, were guaranteed confidentiality and volunteered to participate without compensation. Concerning Study II-IV an ethical approval application to the Regional Ethical Review Board (EPN) in Uppsala, Sweden for the research project RE-SU-LEAD, resulted in an advisory statement, supported by the 4 a § regulation (2003:615) concerning ethical applications for research regarding human beings, that there were no hindrances for conducting the planned research. All participants in the RE-SU-LEAD studies received oral and written information about the aim and design of the project. They were guaranteed that all material that the research group received would be treated confidentially and protected from unauthorized access. Participants were given the opportunity to decide whether or not they wanted to participate, were offered the opportunity to take part of the results, and to contact the research group if they had any questions.

Statistical analyses

Study I

Pearson correlation analyses were carried out to reveal the relationships between academic-, emotional self-efficacy and prosocial behaviour. For Study Ia self-oriented emotional self-efficacy was used and for Study Ib empathic (other-oriented emotional) self-efficacy was added. Multiple regression analyses were conducted to examine the extent to which academic-, self-oriented emotional, and empathic (other-oriented emotional) self-efficacy predicted prosocial behaviour. A series of Sex (male, female) x Ethnicity (immigrant, non-immigrant) between groups ANOVAs were also carried out to assess differences in emotional self-efficacy, academic self-efficacy, and prosocial behaviour.

Study II

Factorial validity of the self-efficacy constructs was investigated with confirmatory analysis (CFA). Subsequently, two group comparisons of invariance between the Swedish and German language versions were carried out to check for differences of measurement. Common method bias was examined using Harman’s single factor test (CMV, Podsakoff, MacKenzie, & Podsakoff, 2003). External validity was investigated using correlations and hierarchical multiple regression analyses to investigate whether the new Occupational Social and Emotional Self-efficacy Scales could explain additional
variance in team climate, emotional irritation, and emotional exhaustion beyond what is explained by occupational self-efficacy. Control variables used were age, country, and gender. Country and gender differences in occupational, social and emotional self-efficacy were investigated using a set of two-way ANOVAs.

**Study III**
The hypotheses were tested using hierarchical linear regression in SPSS (22). As recommended by Aiken and West (1991) all predictors were centered at their mean, and the follower variables emotional exhaustion, work engagement, and tenure with the leader were aggregated at the group level. To test whether this aggregation was justified, ICC(1) and rwg values were calculated (LeBreton & Senter, 2008). Control variables used were country, leaders’ gender, autonomy and workload, and followers’ tenure with their leader.

**Study IV**
The strategy for establishing construct measurement equivalence and subsequently testing the hypothesis consisted of several phases, following the strategy outlined by Byrne (2010) for the SEM analyses and Hayes (2012) for the PROCESS approach in combination with bootstrapping, a statistical re-sampling method. In the present study the number of subsamples was set to \( N = 5000 \) as suggested by Hayes (2009).

First, the measurement model was assessed to discriminate empirically the theoretical constructs of the model and to validate the operational measures included in the study. Second, two Harman’s single factor tests (CMV, Podsakoff et al., 2003) were used to assess common method variance. Third, two group comparisons of invariance between Swedish and German language versions were carried out. Fourth, stability of the measures over time was tested. Fifth, the structural model, specifying relationships between the latent variables according to the hypotheses, was tested using pairwise deletion. The maximum likelihood method of parameter estimation was used with the covariance matrix as input. Synchronous mediation effects were tested with bootstrapping. Sixth, mediation over time was tested using integrated conditional process model in PROCESS (Hayes, 2012).
Summary of studies

Study I: Who Cares about Others? Empathic Self-Efficacy as an Antecedent of Prosocial Behaviour

Aim
The aim of Study 1 was to investigate the role of high school students’ academic and emotional self-efficacy in their self-reported prosocial behaviour and to highlight the value of distinguishing between self- and other-oriented (empathic) emotional self-efficacy.

Hypotheses
- Hypothesis 1 (H1): High school students’ prosocial behaviour are positively correlated with academic self-efficacy
- Hypothesis 2 (H2): High school students’ prosocial behaviour are positively correlated with self-oriented emotional self-efficacy
- Hypothesis 3 (H3): High school students’ prosocial behaviour are more strongly correlated with other-oriented (empathic) self-efficacy than with self-oriented emotional self-efficacy.

Research question
Are there any sex differences in self-reported self-efficacy or prosocial behaviour?

Major findings
In Study Ia there was a positive relationship between academic self-efficacy and prosocial behaviour (H1) but no relationship was found between self-oriented emotional self-efficacy and prosocial behaviour (H2). Nevertheless, when other-oriented emotional self-efficacy (empathic self-efficacy) was added (Study Ib), there was a positive correlation with prosocial behaviour.

In Study Ia the multiple regression analyses revealed that only academic self-efficacy significantly predicted prosocial behaviour. However, in Study Ib self-oriented emotional self-efficacy also predicted prosocial behaviour but was not as strong a predictor as other-oriented emotional self-efficacy (H3).

In Study Ia girls had higher academic self-efficacy than boys and girls also exhibited more prosocial behaviour than boys, but this result was not replicated in Study Ib.
Study II: Social and emotional self-efficacy at work

Aim
The aim of Study II was to develop and test the short work-related Occupational Social Self-efficacy Scale and Occupational Emotional Self-efficacy scale. The aim was also to compare the social and emotional dimensions to a task-oriented cognitive dimension and relate them to team climate, emotional exhaustion and emotional irritation.

Hypotheses
- **Hypothesis 1 (H1):** Occupational-, social-, self- and other-oriented emotional self-efficacy are four separate but correlated constructs.
- **Hypothesis 2 (H2):** Social self-efficacy can explain additional variance in team climate over and above the effects of occupational self-efficacy.
- **Hypothesis 3a (H3a):** Emotional self-efficacy can explain additional variance in emotional irritation over and above the effects of occupational self-efficacy.
- **Hypothesis 3b (H3b):** Emotional self-efficacy can explain additional variance in emotional exhaustion over and above the effects of occupational self-efficacy.
- **Hypothesis 4a (H4a):** Men will report higher occupational self-efficacy than women.
- **Hypotheses 4b (H4b):** There will be no gender difference in social self-efficacy.
- **Hypothesis 4c (H4c):** Women will report higher emotional self-efficacy than men.

Research question
Are there differences in work-related social, emotional and occupational self-efficacy between Sweden and Germany?

Major findings
In Study II, scales to measure social and emotional self-efficacy at work were developed and validated and found to be well differentiated from the cognitive task-oriented occupational self-efficacy scale. Confirmatory factor analyses of data from (226) Swedish and (591) German employees resulted in four separate but correlated self-efficacy dimensions at work: (1) occupational, (2) social, (3) self-oriented emotional and (4) other-oriented emotional. Thus, H1 was supported. The scales have strong psychometric properties in both Swedish and German language versions.

As hypothesized (H2) social self-efficacy explained additional variance in team climate beyond the general occupational self-efficacy measure. Also, self-oriented emotional self-efficacy explained variance in emotional irrita-
tion (H3a) and emotional exhaustion (H3b), over and above effects of occupational self-efficacy.

Men reported higher occupational self-efficacy (H4a), whereas social and emotional self-efficacy revealed no clear gender differences (H4b and H4c). However, a more detailed analysis revealed that women tended to have higher other-oriented emotional self-efficacy in the German sample. Overall, the results revealed that Swedish participants reported higher self-efficacy on all four dimensions.
Study III: What about the leader? Crossover of emotional exhaustion and work engagement from followers to leaders

Aim
The aim of Study III was to examine whether followers’ emotional exhaustion and work engagement can crossover to their leaders over time, as well as whether individual differences in leaders’ emotional self-efficacy act as a moderator for the proposed longitudinal crossover effects from followers to leaders.

Hypotheses
- **Hypothesis 1a (H1a):** There is a positive lagged relationship between followers’ and leaders’ emotional exhaustion.
- **Hypothesis 1b (H1b):** There is a positive lagged relationship between followers’ and leaders’ work engagement.
- **Hypothesis 2a (H2a):** The lagged relationship between followers’ and leaders’ emotional exhaustion is stronger (more positive) when leaders’ emotional self-efficacy is high.
- **Hypothesis 2b (H2b):** The lagged relationship between followers’ and leaders’ work engagement is stronger (more positive) when leaders’ emotional self-efficacy is high.

Major findings
The results in Study III revealed that Swedish participants, both followers and leaders, reported more work engagement than German participants. However, levels of emotional exhaustion did not differ significantly between countries. The main results showed that the crossover of followers’ emotional exhaustion at T1 to leaders’ emotional exhaustion at T2, was moderated by the leaders’ emotional self-efficacy – the negative relationship between followers’ and leaders’ emotional exhaustion was significantly stronger when the leaders’ emotional self-efficacy at T1 was high (see Figure 1). Thus, H1a was not supported and H2a was supported. Nevertheless, the results showed that work engagement crossed over directly from followers to leaders over time - followers’ work engagement at T1 was positively related to leaders’ work engagement at T2 but the leader’s emotional self-efficacy did not moderate the crossover of work engagement. Therefore, H1b was supported and H2b did not receive support. In sum, the results showed that the experience of work engagement in followers affected the experience of the congruent state (work engagement) in their leaders. However, for the psychological state emotional exhaustion, only leaders with high emotional self-efficacy were effected by their followers’ emotional state.
Figure 1. Interaction effect of team emotional exhaustion and leader emotional self-efficacy at time 1 (T1) on leader emotional exhaustion at time 1 (T2), eight months later
Study IV: The relation between transformational leadership and team climate. The mediating role of social self-efficacy.

Aim
The main aim of Study IV was to investigate both synchronous and longitudinal relationships between follower perception of transformational leadership and team climate, as well as the mediating effects of work-related social self-efficacy.

Hypotheses
• Hypothesis 1a and 1b: Transformational leadership has a direct and positive effect on team climate both cross-sectionally (H1a) and prospectively (H1b).
• Hypothesis 2a and 2b: A direct positive relationship exists between transformational leadership and social self-efficacy both cross-sectionally (H2a) and prospectively (H2b).
• Hypothesis 3a and 3b: The impact of transformational leadership on team climate is partially mediated by social self-efficacy both cross-sectionally (H3a) and longitudinally (H3b).

Major findings
The results in Study IV revealed that transformational leadership had a direct and positive effect on team climate cross-sectionally in both the Swedish and the German sample at all three points in time, thus supporting H1a (see Figure 2). However, the longitudinal hypothesis (H1b) that transformational leadership would have an effect on team climate over time showed mixed results since the effect was only significant in the German sample. Thus, hypothesis H1b received only partial support.

The direct positive relationship between transformational leadership and social self-efficacy existed at all three points in time (synchronous effect) in the Swedish sample. However, the effect in the German sample was very small and only present at T3. Therefore hypothesis H2a was supported in the Swedish sample but only to a very small extent in the German sample. Hypothesis H2b that transformational leadership would have a direct effect on social self-efficacy over time was also only supported in the Swedish sample.

Further, the revealed showed that the impact of transformational leadership on team climate was mediated by social self-efficacy at all three points in time in the Swedish sample (with the bias corrected 95% percent confidence interval method), but only at T3 in the German sample. Thus H3a only received partial support. Finally, the results showed that there was a longitudinal effect of transformational leadership on team climate in the German sample but not in the Swedish sample. Also, it was only in Sweden that the longitudinal effect of transformational leadership was mediated by social self-efficacy.
self-efficacy, and thus hypothesis H3b was only supported in the Swedish sample.

![Diagram of hypothesized paths showing the significant relationships between transformational leadership, social self-efficacy and team climate at Time 1 (T1), Time 2 (T2), and Time 3 (T3).]

*Note.* A two sets of parameter estimates are presented. The first set is the Swedish sample (*n* = 104). The second set in parentheses is the German sample (*n* = 654). Standardized β-coefficients are presented for the structural paths. 

\[p < .05, \quad **p < .01, \quad ***p < .001\]

Figure 2. Results for the hypothesized paths showing the significant relationships between transformational leadership, social self-efficacy and team climate at Time 1 (T1), Time 2 (T2), and Time 3 (T3).
Discussion

The overall aim of this thesis is to expand previous theory regarding self-efficacy in the workplace by investigating social, emotional, and cognitive self-efficacy dimensions in relation to leadership, health, and well-being. The interest to study different dimensions of self-efficacy at work started with Study I, where the possibility of integration between the fields of self-efficacy and empathy was explored. The result highlighted the importance of differentiating between the dimensions self- and other-oriented emotional self-efficacy in a school context. This led to the interest to investigate if the importance of differentiating between diverse dimensions of self-efficacy could also be found in a work context. Thus, the general objectives of the current thesis was to investigate the relations between work-related social, emotional, and cognitive self-efficacy and leadership and work-related well-being (i.e. emotional exhaustion, emotional irritation, work engagement and team climate). In order to be able investigate these relations, two short work-related scales, the Occupational Social Self-efficacy Scale and the Occupational Emotional Self-efficacy Scale were developed and tested in Study II. The general objective was also to add to the development of a more integrated leadership literature which considers leaders and followers alike and recognizes their mutual influence in shaping their work experiences. These theoretical assumptions were explored in Study III and IV where leadership was studied as a social interaction process. Next, the main findings from the four empirical studies are discussed in relation to previous research and the conceptual literature.

Main findings

Emotional self-efficacy oriented towards oneself or others

The aim of Study I was to study the role of high school students’ academic and emotional self-efficacy in their self-reported prosocial behaviour and to investigate the possible value of distinguishing between self- and other-oriented (empathic) emotional self-efficacy. The results of Study Ia and Ib are consistent with previous research (e.g. Bandura et al., 2003), and support the idea that emotional self-efficacy is an important situational antecedent to
prosocial behaviour. Because results regarding sex differences were inconsistent across the two studies no conclusions about them were drawn.

Bandura (1997) refers to emotional self-efficacy as a person’s belief in his or her ability to understand and use emotional information. While a more traditional self-efficacy paradigm was maintained in Study Ia, in Study Ib the other-oriented perspective was added, inspired by the empathy field. A number of empirical studies have shown that empathy evokes prosocial behaviour. Previous conceptualizations of empathic self-efficacy (e.g. Bandura, 1993) focused on the empathizer experiencing the target’s emotions. In Study I, in contrast, the definition of empathic (other-oriented emotional) self-efficacy was based on Batson’s (Batson, et al., 1997) notion of empathy in terms of special feelings of compassion because this is the type of empathy that has been shown to generate altruistic helping. In this study other-oriented emotional self-efficacy was more strongly related to prosocial behaviour than self-oriented. This is a new way of measuring emotional self-efficacy in relation to prosocial behaviour and the contribution of these two studies are primarily to draw attention to the possibility of enriching the concept of emotional self-efficacy with insights from the empathy field. Consistent with these ideas, the result from Study I demonstrates the value of distinguishing between emotional self-efficacy that is oriented towards oneself and that which is oriented towards others.

In sum, Study I adds to the knowledge regarding the benefits of differentiating between different dimensions of self-efficacy in a school context (i.e. cognitive task oriented (academic), self- and other-oriented (empathic) emotional self-efficacy). These results raised the question of whether these distinctions could also be important and meaningful also in a work context. Accordingly, the knowledge from Study I was used in Study II-IV to further elaborate and investigate social, emotional, and cognitive dimensions of self-efficacy in a work context.

The dimensionality of self-efficacy at work

The aim of Study II was to develop and test the short work-related Occupational Social Self-efficacy Scale and Occupational Emotional Self-efficacy Scale. The aim was also to compare the social and emotional dimensions to a task-oriented cognitive dimension and relate them to team climate, emotional exhaustion and emotional irritation.

When analysing the social and emotional scales together with the occupational scale, the confirmatory factor analyses supported hypothesis 1 that, although they were related, all four were distinct constructs. Fan and colleagues (2012) suggested that the understanding of self-efficacy’s role in workplace social relationships might be facilitated through a better targeting of self-efficacy to the workplace social domain. The Occupational Social
self-efficacy Scale developed in study II is shorter than existing scales and all five items showed good factorial validity. Together the items are intended to measure one’s confidence in the capability to engage in social interactional tasks necessary to initiate, maintain and develop interpersonal relationships at work. In line with results from Study I, content validity showed that the Occupational Emotional Self-efficacy Scale consisted of two sub-dimensions. Thus, when using it and interpreting results, a division into self- and other-orientation should be considered. The emotional scale measures confidence in the capability to perceive, understand, regulate and use negative emotional information from both oneself and others at work and consists of eight items. The four self-oriented items are intended for aspects of personal development, and the four other-oriented items are intended for the focus on interaction, relationships, and group dynamics. As for the Occupational Social Self-efficacy Scale it could be used for a wide range of occupations where social interaction and teamwork is required.

Due to previous findings on cultural differences between Sweden and Germany, for example on the dimensions masculinity and uncertainty avoidance (Hofstede, Hofstede, Minkov, 2010), there was an interest in Study II to compare responses from these two countries. Results from the structural invariance analyses showed that the different dimensions of self-efficacy were well differentiated in both countries which means that the Swedish and German language versions are reliable. The result that Swedish participants reported higher self-efficacy than participants in Germany might underline the influence of cultural or organizational contextual aspects. More in-depth investigation of cultural versus organizational differences would have been necessary to firmly establish the reasons for this difference. A difference between the samples was that the Swedish sample came from the public sector, whereas the German sample consisted of employees both from the public and the private sector. It is also worth considering that the Swedish participants were significantly older. Bandura suggests (1997) that successful negotiation of life challenges is likely to enhance self-efficacy as people get older. However, the associations between age and all self-efficacy dimensions found in Study II were weak.

Social and emotional self-efficacy have been shown to be potentially important resources but have thus far been largely overlooked within the workplace domain. Fan et al., (2012) did not investigate the relationship between social self-efficacy and team climate, a relevant association, which this study can elucidate. Results revealed that the social scale could predict team climate over and above the occupational scale, giving support to Hypothesis 2. Believing in one’s social skills seems to impact how the social interactions are perceived in a team. For example, these results support the notion that the regulatory skills underlying social self-efficacy could give employees the confidence to solve conflicts that occur with colleagues, to
overcome frustrations, to remain calm and in a good mood, and to manage problematic situations at work (Gist & Mitchell, 1992; Bandura, 1997). Team climate is an important variable in the work context because it influences variables like cooperation in teams. The individual's contribution to the group, for example via social self-efficacy, could be important in building up the climate. However, team climate is multiply determined, and self-efficacy from an individual can only account for little additional variance. This could partly explain the low effects. However, since self-rated measures were used, longitudinal studies would be needed to further explore the direction and the long-term relationship between social self-efficacy and team climate. This was investigated in Study IV.

Self-oriented emotional self-efficacy showed a small significant and unique relationship with emotional irritation and emotional exhaustion, giving support to Hypothesis 3a and 3b. This suggests that employees who feel confident about their emotional competence are less likely to feel emotional irritation and emotional exhaustion, and would therefore be better equipped at coping with emotionally uncertain situations. The self-oriented emotional items could be particularly useful in understanding individual experiences and in personal development. The low association between the other-oriented emotional scale and the stress related constructs used in this study could possibly be explained by their focus on individual’s subjectively perceived strain in an occupational context. In addition, the other-oriented scale might be more relevant for leaders because their role more clearly requires being supportive, caring for, and understanding their staff. The relevance of emotional self-efficacy for leaders is something that is investigated in Study III.

The finding that men reported higher occupational self-efficacy than women, was in line with previous research (e.g. Abele & Spurk, 2009, Williams & Betz, 1994). The items used to measure occupational self-efficacy focus on task-related aspects like confidence in problem solving, reaching one’s goals in the job and finding solutions to problems, and exclude interpersonal aspects. This strong emphasis on agency and the lack of communality is more in line with the prescriptive male gender stereotype and might explain why men report higher occupational self-efficacy than women. In addition, there are studies that indicate that although the actual abilities do not differ between women and men, women tend to be less likely to perceive themselves as skilled, in for example high technology tasks (Correll, 2001; Hargittai & Shafer, 2006). Addressing criterion validity, our assumption that women stress emotional self-efficacy more than men could be confirmed for the other-oriented subscale but only in the German sample. The other-oriented emotional self-efficacy items embraces aspects of care and support for others being in line with the communality aspects of the gender role norm. However, cultural differences in gender role norms also seem to come
into play. No general gender differences could be found for social self-efficacy. Obviously social interactions, especially in the work setting, are not seen as something stereotypically female. Even when the general female gender role embraces more likely norms of communality, it does not necessarily apply to the occupational context investigated in this thesis.

In sum, the main contributions of Study II are two new instruments: the Occupational Emotional Self-efficacy Scale and Occupational Social Self-efficacy Scale. They assess self-efficacy for inter- and intrapersonal processes in the workplace domain and are well differentiated from cognitive task-oriented occupational self-efficacy. The social and emotional instruments are characterized by strong psychometric properties in two language versions (Swedish and German), and high generalizability. Additionally, having confidence in your social skills (social self-efficacy) turned out to be beneficial for team climate, and believing in your emotional competence (emotional self-efficacy) made it less likely to be emotionally irritated and exhausted.

Crossover of emotional exhaustion and work engagement from followers to leader.

The aim of Study III was to examine whether followers’ emotional exhaustion and work engagement can crossover to their leaders over time, as well as whether individual differences in leaders’ emotional self-efficacy act as a moderator for the proposed longitudinal crossover effects from followers to leaders.

In Study III, different effects with regard to the crossover of work engagement and emotional exhaustion from followers to leaders were found. Whereas work engagement crossed over directly, the crossover of emotional exhaustion was moderated by leaders’ emotional self-efficacy. This finding supports a leadership model where followers play an active part beyond solely ‘receiving’ leadership efforts (Uhl-Bien et al., 2014). This further demonstrates, further, that followers contribute to shaping leaders’ work experience, and can affect leaders’ well-being at work. Leaders’ individual differences in terms of emotional self-efficacy appear to play a role in the perception and crossover of strain. Thus, the results supports our notion of an empathic crossover process: Leaders’ who consider themselves to be particularly competent in the emotional area pay more attention to emotional expressions of their staff (Bandura, 1997), are more likely to detect negative emotions (Mayer & Salovey, 1993), and are, in turn, more likely to experience negative emotions themselves (Bakker & Schaufeli, 2000). It is also possible that leaders with high emotional self-efficacy personalize the negative emotional experiences of their followers, and therefore themselves develop negative symptoms over time (Bandura et al., 2003). In line with social cognitive theory (Bandura, 1999b), and the result in Study I, being em-
pathic can serve a proactive intrapersonal and prosocial function. People form self-conceptions embodying self-evaluative standards of social obligations. They act in accordance with their personal standards to preserve their self-respect. A vulnerability based on being empathic presents the challenge of how to moderate the personalization of other people’s distress and suffering to minimize impairing personal anguish without becoming emotionally indifferent to the plight of others (Maslach, 1982).

Leaders’ emotional self-efficacy did not play a role in the crossover of work engagement, indicating that a different mechanism (e.g., emotional contagion) could be at work here. Further, this finding could be attributed to the leadership role. Followers could be particularly expressive in their work engagement toward their leaders to prove their commitment and positive attitude at work (Wayne & Green, 1993). This would make work engagement especially easy to detect for leaders, regardless of their emotional capability (beliefs) and this could promote a more automatic transfer process. Further, it is possible that leaders, duly or unduly, attribute their followers’ work engagement to their own leadership success. This feeling of personal accomplishment could, in turn, cause leaders to experience higher work engagement themselves (Hakanen, Schaufeli, & Ahola, 2008). Moreover, from a cognitive perspective, leaders perceiving their team as engaged may worry less about team performance, and focus more on their own tasks, experiencing higher work engagement (Schaufeli et al., 2002).

In interpreting the results that work engagement crossed over directly, whereas the crossover of emotional exhaustion was moderated by leaders’ emotional self-efficacy, one should consider the differences in the consistency of engagement and exhaustion within teams. Work engagement seemed to be more of a collective experience, whereas emotional exhaustion was more idiosyncratic, rendering the engagement climate more reliable than the emotional exhaustion climate. Further research is needed to identify boundary conditions and determinants of crossover in different contexts, as well as underlying mechanisms of crossover processes.

In sum, Study III partially supports earlier findings that imply that strain as well as engagement can cross over from work teams to individuals. Previous research is extended by shifting focus from crossover within work teams to crossover from followers to leaders, showing that crossover works in this context as well. Study III adds to leadership literature with an increasing focus on the mutual influence between leaders and followers and emphasizes that followers play an important part in shaping leaders’ work experience. In addition, more specifically, Study III contributes with new knowledge of a dark side of emotional self-efficacy. This is due to the fact that leaders’ emotional self-efficacy resulted in a vulnerability to the followers’ strain, which is in line with job demands-resource theory – followers’ psychological states can pose a demand or resource for leaders, and influence their well-being.
Transformational leadership, social self-efficacy and team climate

The main aim of Study IV was to investigate both synchronous and longitudinal relationships between follower perception of transformational leadership and team climate, as well as the mediating effects of work-related social self-efficacy.

Study IV revealed that there was strong support for a cross-sectional direct and positive relationship between transformational leadership and team climate in both the Swedish and German sample. This is in line with a study by Avolio, Zhu, Koh, and Bathia (2004) revealing that transformational leaders were able to build a team spirit through their enthusiasm, high moral standards, integrity, and optimism. These leaders also provided meaning and challenge to their followers’ work and enhanced their self-efficacy, confidence, meaning of work, and self-determination. However, in Study IV, over time the relationship between transformational leadership and team climate only existed in the German sample. This indicates that for these processes time is an important factor. It is possible that the consequences of perceived transformational leadership behaviour may vary over time depending on for example differences in work contextual factors (i.e. private or public sector), leadership ideals or other cultural dimensions.

Relationships between transformational leadership and social self-efficacy turned out to be more complex as this relationship was fully supported in the Swedish sample, but only at T3 in the German sample. In addition, it was mostly in the Swedish sample that the relationship between transformational leadership and team climate was mediated by social self-efficacy. Charbonneau, Barling, and Kelloway (2001) showed that transformational leaders could enhance intrinsic motivation through being supportive and promoting autonomy. This empowering process is thought to increase followers’ self-efficacy, previously supported by Kanungo and Mendonca (1998), which can partially explain the positive relationship between transformational leadership and social self-efficacy in the Swedish sample. One possible reason for the lack of direct effect in the German sample for T1 and T2 could be that the organizations had only recently started to focus on transformational leadership behaviours. The immediate impact of followers’ perception of themselves may take time and becomes apparent only at T3. In Sweden, a human-oriented leadership approach has been much more appreciated as an ideal leadership behaviour than in Germany. Results from the RE-SU-LEAD project revealed that participants in the Swedish sample perceived their leaders as significantly more transformational as did the participants in the German sample. Traditionally German leaders have been expected to be more decisive, assertive and focused on achieving results whereas an effective manager in Sweden has generally been expected to be supportive to her or his followers and decision making have been achieved through involvement (Hofstede, et al., 2010). Thus, the emphasis in Germa-
ny on performance and in Sweden on relationships could make it more natural for Swedish transformational leaders to promote social self-efficacy. A possible explanation could perhaps be found using the self-concept based theory of the motivational effects of transformational leadership. Shamir et al., (1993) implied that transformational leaders will not have the same effects on all followers. In order to achieve the transformational effects specified in the theory, the leader must appeal to existing elements of followers’ self-concepts wherein their values and identities are included. A transformational leader does not install completely new values and identities in the followers’ self-concepts, but rather raise their salience and connect them with goals and required behaviours (1993). The self-concept-based theory has been suggested to help understand the motivational effects of transformational leaders (Bono & Judge, 2003). In this theory, the interaction between the leader and the follower becomes a central part, as it also implies that followers actively decide to follow a transformational leader or not, based on the extent to which the leader is perceived to represent their values and identities. The self-concept based theory can possibly help to, at least partially, explain the different patterns for the leadership processes investigated in Study IV.

In sum, the contribution of Study IV can be found in the new knowledge that transformational leadership behaviour appears to promote team climate, a functioning that is vital for the whole group. Over time, however, this process turned out to be more complex. Transformational leadership can also be positive for building up the followers’ belief in their capability to develop and maintain good relationships with others in the work place (i.e. social self-efficacy). The relation between transformational leadership and team climate can also be mediated by social self-efficacy. However, these processes turned out to be more complex and may vary depending on, for example leadership ideals, cultural norms and values connected to the individuals in the specific work contexts.

Methodological considerations

Although the self-efficacy dimensions investigated in this thesis (Study II-IV) were related, Study II revealed that they were all four separate but correlated self-efficacy constructs: (1) occupational, (2) social, (3) self-oriented emotional and (4) other-oriented emotional. The new Occupational Emotional Self-efficacy Scale and Occupational Social Self-efficacy Scale, developed for this thesis, had strong psychometric properties in both Swedish and German language versions. The equivalence across the German and the Swedish language versions of the items was important as the hypothesized models for Study III and Study IV were tested in two culturally different samples. Another advantage of the new Occupational Emotional Self-
efficacy Scale and Occupational Social Self-efficacy Scale is that they are short. Short economic instruments that shows good validity and reliability are especially important for research in the occupational context because people usually have to fill in questionnaires during their working time. The intermediate level of the scales is also an advantage because they can be used in a variety of organizations and for a diversity of situations within the work context.

The self-efficacy measures for all four studies rely on self-reports. Self-efficacy is a highly subjective construct and in accordance with social cognitive theory, no one other than oneself can report on one’s own internal states and personal beliefs (Bandura, 1997). This necessitates reliance on participants’ self-reports which may be biased, so caution should be exercised when interpreting the results in all four empirical studies. However, the common method and common source biases were investigated with Harman’s single factor tests (Podsakoff, et al., 2003), and the results suggested that common method variance was not likely to be a major problem in Study II and Study IV.

Bandura (1986) stated that the influence of self-efficacy is partially socially constructed and that such constructions may differ as a function of national culture. Since data in the RE-SU-LEAD project was obtained from both a Swedish and German sample it was possible to make cross-cultural comparisons within this thesis. There are continuing and non-random cultural differences between European countries, and Sweden and Germany belong to two different European clusters (Nordic versus Germanic). However, Triandis (2000) criticizes cross-cultural research that simply mentions a country as explanation for some differences and emphasizes the importance of going deeper and investigate more specific aspects of culture. Members of the same national culture adopt different orientations depending on social circumstances; thus, as Bandura (1997, 2002) stated, individuals express their cultural orientation conditionally rather than invariantly. Cultures and societies are enormously heterogeneous and within each culture there are large individual and group variations. For this thesis a multilevel approach could have offered some benefits. However, because of power restrictions, it was not possible to estimate longitudinal robust models with the small size of the data set. This means that great caution must be used when interpreting the country differences found in this thesis. It is important to stress the fact that the Swedish sample is primarily representative of employees working in the public sector, whereas the German sample consisted of employees both from the public and the private sector.

A methodological advantage of this thesis lies in the longitudinal design of the RE-SU-LEAD project. For Study III, information was collected at two points in time across a period of eight months, and this is the first study to examine crossover in the workplace in a longitudinal design. For Study IV
the hypotheses were tested in three ways simultaneously: both cross-sectionally, prospectively, and longitudinally, using data from three points in time within 22 months. This is the first longitudinal study that investigates the direct effect of transformational leadership on team climate, and whether social self-efficacy mediates this relationship. Whereas the methodological advantages of Study III and Study IV lie in their longitudinal design, limitations must also clearly be noted. The main limitation is the small sample size in these studies, caused by the data structure and dropout between data collection points. A larger sample would have been preferable, however, it was not viable in these cases, considering the efforts spent on recruiting the relatively large primary sample. Further, for Study III, one should note the heterogeneity of the samples in terms of nationality and occupation. An effort was made to balance the samples by including participants in a wide range of occupations; nevertheless this diversity could mask potential effects. In Study III, it was decided not to use separate analyses for the German and the Swedish samples and also for the different subgroups because this would have diminished the sample size considerably.

The time lag between measurements at time one, time two and time three was chosen mainly out of practical considerations. However, longitudinal studies have shown positive lagged relationships, for example between job demands and emotional exhaustion, as well as job resources and work engagement in timeframes from three months up to three years (e.g. Hakanen et al., 2008; Houkes, Janssen, de Jonge, & Bakker, 2003; Idris, Dollard, & Yulita, 2014; Philipp & Schüpbach, 2010). This suggested that it would be possible to detect changes in the longitudinal Study III and Study IV. Still, the shortcoming of measurements in different seasons hampers the evaluation of changes over time somewhat. In Sweden T2 took place right after the summer holidays, which could have had an impact on the responses from the Swedish participants. The fact that in Study III only one crossover effect from followers to leaders within the timeframe of the study (work engagement) was found, confirms the assumption that followers’ mental states can pose a demand or resource for leaders, whose prolonged exposure to these job aspects can result in strain or engagement. While direct, immediate, and lagged crossover effects for work engagement was recorded, the same could not be confirmed for emotional exhaustion. The question of which timeframes are necessary for crossover of exhaustion and engagement to occur in a leadership context, needs to be explored further. In addition, the inconsistent longitudinal results between the Swedish and German sample in Study IV could perhaps be connected to the time frames.
Future research

In Study I, prosocial behaviour was self-reported. In order to advance the ideas spelled out in this study, future research should test the effects of empathic self-efficacy on actual behaviour. In addition, generally the new Occupational Social and Emotional Self-efficacy Scales used in Study II-IV need further investigation in different occupations and more varied samples. From a work and organizational research perspective, one theoretical implication is that when applied in for example future leadership research, the new self-efficacy scales could be used to understand the interaction between personal resources like self-efficacy within different belief systems (social, emotional, and cognitive) and job demands (stressors) and job resources. This understanding would be vital from a leadership perspective, and also have relevance for health and well-being. In addition, Study I and Study II showed that it was important to distinguish between emotional self-efficacy with regard to one’s own and to others’ emotions. However, as factor analysis in Study III did not support a two-factor model in that sample, the combined measure of emotional self-efficacy was used in that study. Future research should continue to investigate the new Occupational Emotional Self-efficacy Scale and look at different effects of leaders’ confidence in recognizing and managing their own, as opposed to others’ emotions. Also, other potential moderators should be tested in future research, particularly with regard to individual differences in the emotional domain. Moreover, in Study III, it was hypothesized that leaders’ emotional self-efficacy would make them more susceptible to crossover processes through an enhanced focus on followers’ emotions, enabling correct identification of mental states (Bandura, 1997; Mayer et al., 2003). It would be very interesting to see, however, whether the actual ability to manage one’s own and others’ emotions could act as a buffer in the crossover process, particularly with regard to strain. Even though efficacy beliefs have shown a positive relationship with actual performance (Judge & Bono, 2001), the two constructs are qualitatively different from each other, the former also being more dynamic than the latter (Kirk et al., 2008). Therefore, adding a measure of emotional ability, and comparing it to emotional efficacy could be fruitful. Furthermore, the inconsistencies in the findings in Study IV regarding the Occupational Social self-efficacy Scale indicates that this new scale needs to be investigated further in relation to its antecedents and consequences.

Due to previous findings on differences between Sweden and Germany on different cultural dimensions (Brodbeck, et al., 2000; Hofstede, et al., 2010) there was an interest to compare responses from these two countries. The results in Study IV showed that Swedish participants reported higher scores on all self-efficacy dimensions at all three time points but that the relationships between independent and dependent variables were comparable between countries. Whether these differences in self-efficacy beliefs are due
to differential conditions for the development of self-efficacy or if they might by an artefact of age differences in our sample, as Swedish participants were older, are questions which need to be addressed in future research.

In Study III, the focus was on crossover from followers to leaders. Even though no effects from leaders to followers were found in the exploratory analyses, future research could investigate mutual crossover processes (Westman & Etzion, 1999) more extensively (i.e. in a longitudinal design, or by including different moderators). Researchers should moreover consider that leaders, in many cases, are followers too. Inserting an additional level of analysis could yield interesting results with regards to the top-down versus bottom-up nature of crossover. It could be, for example, that engagement crosses over more easily from followers to leaders, whereas the direction of strain crossover is reversed. Next to the targets of crossover, the mental states under examination in Study III can be discussed. We looked at concordant psychological states in leaders and followers, whereas research on the crossover of converse states also looks promising (Bakker et al., 2006).

The divergent findings in Study III, with regard to the crossover of emotional exhaustion and work engagement, hint at potentially different mechanisms in the crossover of strain versus engagement, at least in a leadership context. The results support the notion of empathic crossover in the case of emotional exhaustion and a direct contagion process in the case of work engagement. Future research should look more closely at underlying cognitive and affective processes of crossover, such as empathic reactions versus unconscious induction (Hatfield, Cacioppo, & Rapson, 1994; Hsee, Hatfield, Carlson, & Chemtob, 1990), to clarify whether differential mechanisms in the crossover of strain versus engagement exist.

In Study III, the focus was shifted from followers to leaders (in terms of health outcomes), and furthermore, demonstrated that followers influence their leaders’ work experience. This adds to the development of a more integrative leadership literature, which considers leaders and followers alike, thereby emphasizing that health outcomes on a leader level should receive more empirical attention. Interpreting the results within the framework of job demands–resources theory (Bakker & Demerouti, 2014), social interactions with followers can pose a considerable resource, or a work demand, for leaders, affecting their experience of well-being and strain. Requirements comparable to those faced by followers in occupations with high emotional labour demands are innate to the leadership role (Humphrey, Pollack, & Hawver, 2008). Therefore, whether these interactions cause positive (engagement) or negative (exhaustion) outcomes in leaders may depend partially on followers. Both leaders and followers may contribute mutually to the social interactions at work, and thus jointly design their shared environment.
The outcomes from Study IV suggests that a transformational leader not only influences work-related attitudes and well-being on an individual level, but also impacts functioning that is vital for the whole group (i.e. team climate). One possible explanation is that transformational leaders address many of their actions toward the entire work group for example by setting group goals and fostering a team spirit. It could be that transformational leaders are important facilitators for the formation of cohesive groups with desirable team climate, through for example individual consideration and idealized influence. However, this has to be explored in future studies. There are three necessary conditions that need to exist in order for shared perceptions and shared climate to occur at the group level: Individuals must interact, individuals must have some common goal that predispose them toward collective actions, and there must be sufficient task interdependence to develop shared understandings (Anderson & West, 1998). The possibility that transformational leadership behaviour capabilities enable these conditions to exist is something that needs to be addressed in future research.

The results from Study IV indicate that the effects of transformational leadership on team climate may vary over time, and this can possibly depend on, for example, leadership ideals and cultural norms and also values that exists in the work context. Second, the relationship between transformational leadership and social self-efficacy turned out to be complex as this relationship was only fully supported in the Swedish sample. In addition, the mediating effects of social self-efficacy were mostly supported in the Swedish sample. As globalization has increased in recent years, a need for cross-cultural organizational studies has evolved among organizational practitioners and researchers alike. There are differing views concerning the extent to which effects of certain leadership behaviours are universal (Dickson, Den Hartog and Mitchelsons, 2003; Ekvall & Arvonen, 1991; Hofstede, 2001). Consequently, the inconsistencies in the results from Study IV emphasize the need for further research in this field.

Practical implications

After completing all four studies, and according to the findings obtained, several practical implications can be discussed. The findings that other-oriented (empathic) emotional self-efficacy was positively related to prosocial behaviour implies that empathy, in terms of special feelings of compassion to others, can generate altruistic helping. Among behaviourally oriented self-efficacy beliefs, the perceived capability to sense another person’s feel-
ings (empathic self-efficacy) has shown the highest correlation with prosociality (Alessandri, Caprara, Eisenberg, & Steca, 2009; Caprara & Steca, 2005, 2007; Caprara, Alessandri, & Eisenberg, 2011) and is clearly critical for promoting successful adaptation and well-being (Di Giunta et al., 2010). It could be that if individuals feel capable of handling empathic feelings, they are unlikely to become overpowered by them and will instead experience sympathetic concern. Although Study I was primarily theory-driven, these findings could for example inspire the development of programs aimed at teaching children to believe in their empathic capabilities.

As Fan et al. state (2012), one appealing feature of domain specific conceptualizations of self-efficacy is that it represents self-efficacy as changeable, and subject to external influences such as training and coaching. The benefit of differentiating self-efficacy dimensions (i.e. social, emotional and cognitive) within the workplace domain could be to target certain dimensions where employees show strengths or shortcomings and to focus energy on boosting self-efficacy where it is most needed. In jobs where intensive social interactions are necessary, there can be advantages in having high levels of social and emotional self-efficacy. The findings in Study II and Study IV suggest that social self-efficacy can be essential for building team climate and especially self-oriented emotional self-efficacy may be important beliefs for reducing emotional irritation and exhaustion. The Occupational Social- and Emotional Self-efficacy Scales could be used as diagnostic tools before training and as evaluation tools after training.

In addition to fostering an interactive understanding of leadership, Study III adds to the crossover literature. This research offers several managerial implications, particularly with regard to organizational health management. From an organizational perspective, leaders are often considered promoters of follower health. Programs aimed at psychological resilience and health should also consider reverse effects and adopt a more holistic approach to creating healthy working environments. Particularly, social relationships at work should be targeted as stressors or leveraged as resources because they play an important role in the development of negative symptoms, such as burnout (Buunk & Schaufeli, 1993).

An additional insight from Study III lies in the potential effects of individual differences in the crossover process, namely emotional self-efficacy. Whereas the trend to promote a more emotion-focused leadership style (Goleman, Boyatzis, & McKee, 2001) may be beneficial to followers (e.g. Harms & Crede, 2010; Palmer et al., 2000; Rubin et al., 2005), potentially harmful effects on the leader should be considered. For example, leaders’ specific work demands in terms of emotional labour (Humphrey et al., 2008) can take an emotional toll (Bandura et al., 2003). The results from Study III imply that leaders’ emotional self-efficacy can be interpreted in terms of vulnerability. Although this result is puzzling to some extent, as leaders with
high emotional self-efficacy should not only be apt at interpreting but also managing their own and others’ emotions, it is in line with a growing body of research examining the negative consequences of self-efficacy. Examples of negative outcomes are overconfidence (Vancouver & Kendall, 2006; Vancouver, Thompson, Tischner, & Putka, 2002), workaholism (Del Libano, Llorens, Salanova, & Schaufeli, 2010), and vulnerability to depression over time (Bandura et al., 2003).

The results from Study III imply that it can sometimes be counterproductive to enhance leaders’ emotional abilities in a team of exhausted followers if the result is an exhausted leader rather than an exhilarated team. In this context, it is important, however, to differentiate between identification and management of emotions (Mayer & Salovey, 1993). Effective emotion management could buffer the potentially harmful effect of perceiving negative emotions. Nevertheless it is emphasized that occupational emotional self-efficacy can still have positive outcomes in an organizational setting (e.g. performance, identification) that have not been the focus of Study III. Further research is needed to arrive at a more definitive conclusion in this regard.

Results from this thesis highlight the practical implication that training managers to exert transformational leadership behaviours may simultaneously promote team climate. However, results from Study IV contribute to the understanding in leadership literature that outcomes from leadership behaviour may vary for different work contexts. Managers working in increasingly globalized contexts need to take into consideration that social processes may differ depending on the organization and the workplaces they operate in.

From the Positive Psychology viewpoint, seeing self-efficacy as a resource and capacity, applying intervention techniques to increase self-efficacy values makes sense because it aims to promote the factors that allow individuals and organizations to thrive, and healthy employees are mostly those who present higher levels of self-efficacy (Schaufeli & Salanova, 2008). It could be essential to improve self-efficacy because people with high self-efficacy generally perceive demanding situations as challenges, are highly committed to the activities they carry out, invest a lot of time and effort in their activities, think strategically to solve difficulties, recover easily from failure or difficulty, feel they are in control of a majority of stressors, and also feel they are less vulnerable to stress and depression (Bandura, 1997). All these characteristics help them to become better professionals. Therefore, interventions often aim for increased self-efficacy beliefs in order to improve well-being and job performance at work. However, this thesis highlights the fact that these interventions should probably be specific to each work setting. In addition, this thesis revealed that it is not always ‘the higher, the better’ when it comes to levels of self-efficacy, which is a vital piece of knowledge. If it was possible to find the optimum point of efficacy in each case, negative consequences could perhaps be avoided.
Concluding remarks

The work-related Occupational Social- and Emotional Self-efficacy Scales provides promising tools both from a theoretical and a practical perspective. The main theoretical contribution of this thesis is to expand previous theory regarding self-efficacy in the work place by incorporating social, emotional, and cognitive dimensions of self-efficacy. The main practical implication lies in that the new self-efficacy scales can be used to promote health and well-being in the work place through activities such as recruitment, staff development, and team-building. However, the results from this thesis indicates that interventions aimed at improving health and well-being should be specific to each work setting. Training managers to exert transformational leadership behaviors’ may simultaneously promote team climate and this process may work through social self-efficacy. Nevertheless, the processes can vary depending on, for example, leadership ideals, cultural dimensions and work contexts. This thesis also implies that it could be counterproductive to enhance leaders’ emotional abilities in a team of exhausted followers if the result is an exhausted leader rather than an exhilarated team. Leaders are often considered promoters of follower health. This thesis highlights that programs aimed at psychological resilience and health should also consider reverse effects and adopt a more holistic approach to create healthy work environments.
Svensk sammanfattning

Forskning har på ett övertygande sätt visat att tilltron till den egna förmågan (self-efficacy) är en av de viktigaste personliga resurserna i arbetssammanhang. Arbetslivsforskning har främst fokuserat på en kognitiv och uppgiftsorienterad dimension av self-efficacy, vilken främst speglar den tilltro som de anställda har till sin kompetens att klara av sina arbetsuppgifter. Därför är obetydligt känt om det inflytande som tilltro till social och emotionell kompetens på jobbet kan ha. Syftet med denna avhandling är att utvidga teorin om self-efficacy i arbetslivet genom att undersöka sociala, emotionella och kognitiva dimensioner av self-efficacy i relation till ledarskap, hälsa och välbefinnande.

Avhandlingen bygger på fyra empiriska delstudier, där samtliga handlar om betydelsen av att ha tilltro till sin egen förmåga i relation hälsa och välbefinande, och två av dem även behandlar ledarskap. För Studie I användes enkätdata från 169 gymnasieelever, medan Studie II-IV är baserade på enkätdata från ett treårigt internationellt forskningsprojekt om hälsofrämjande ledarskap. Medarbetare och ledare från 229 arbetsgrupper, i 12 organisationer i Sverige och Tyskland från ett brett urval av yrken deltog.

Resultat från Studie I visar att tilltro till den egna förmågan att kunna hantera känslor (emotionell self-efficacy) är viktig för prosocialt beteende; resultatet belyser även värdet av att skilja mellan olika dimensioner av self-efficacy. Studie II är en tvärnittsstudie som validerar de nya arbetsrelaterade sociala och emotionella self-efficacy-skalorna; och indikerar att de sociala och emotionella dimensionerna är positivt relaterade till välbefinnande. Studie III belyser negativa sidor av emotionell self-efficacy då emotionell utmattning hos de anställda fördes över till cheferna, om cheferna hade hög tilltro till sin emotionella förmåga. Studie IV visar att transformativt ledarskap och tilltro till den sociala förmågan kan vara positivt för gruppklimatet.

Det främsta teoretiska bidraget med avhandlingen är att utvidga den tidi- gare teorin om self-efficacy i arbetslivet genom att integrera sociala, emotionella och kognitiva dimensioner. Det främsta praktiska bidraget är att de arbetsrelaterade sociala och emotionella self-efficacy-skalorna kan användas som verktyg för att främja hälsa och välbefinnande på arbetet genom aktiviteter som rekrytering, personalutveckling och teambuilding. Avhandlingen tyder på att: (a) utbildning i transformativt ledarskap kan främja gruppklimatet och processen kan fungera genom att tilltron till den sociala förmågan
byggs upp, (b) det kan vara kontraproduktivt att förbättra chefens emotionella förmåga om chefens grupp är utmattad, då resultatet kan leda till en utmattad ledare snarare än en upprymd grupp, (c) insatser som syftar till att förbättra hälsa och välbefinnande gärna bör vara specifika för varje arbetsplats, och (d) interventioner som syftar till att stärka hälsa och välbefinnande på arbetet bör ta hänsyn till den ömsesidiga påverkan som ledare och medarbetare har på varandra för att skapa hälsosamma arbetsmiljöer.
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I have been out on a tremendous journey for almost six years. When I set off, the ocean seemed endless and the shore on the other side was far out of reach. It appeared to be a very distal and almost unobtainable goal. Sometimes the storms were very intense. However, I made it, and thus it seems that whether you think that you can, or that you can’t, you are usually right. Yet, without a number of people this journey would never have been possible.

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Stallarholmen, September 2016
Carina Loeb
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Appendix A

Overview of different concepts of occupational-, emotional- and social Self-efficacy

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Abbreviation</th>
<th>Response scale</th>
<th>Items</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational self-efficacy</td>
<td>Belief in one’s own ability and competence to perform successfully and effectively in different situations and across different tasks in a job</td>
<td>OCCSEFF</td>
<td>1=completely true 6=not at all true</td>
<td>19</td>
<td>Schyns &amp; Collani (2002)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OCCSEFF-8</td>
<td>1=completely true 6=not at all true</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OCCSEFF-6</td>
<td>1= not at all true 6=completely true</td>
<td>6</td>
<td>Rigotti &amp; Mohr (2008)</td>
</tr>
<tr>
<td>Emotion work related self-efficacy</td>
<td>Belief in one’s abilities to successfully perform emotion work</td>
<td>ESES</td>
<td>1=not at all confident 5=very confident</td>
<td>32</td>
<td>Heuven, Bakker, Schaufeli &amp; Huismans (2006)</td>
</tr>
<tr>
<td>Emotional self-efficacy</td>
<td>Belief in one’s ability to perceive, use, understand, and regulate emotions</td>
<td>ESES-24</td>
<td>1=strongly disagree 5=strongly agree</td>
<td>24</td>
<td>Kirk, Schutte &amp; Hine (2008)</td>
</tr>
<tr>
<td></td>
<td>Belief in one’s ability to perceive emotions in self and others, use emotions to facilitate cognitive processes, understand emotional complexity and manage emotions in self and others</td>
<td>ESES-24</td>
<td>1=strongly disagree 5=strongly agree</td>
<td>24</td>
<td>Dacre Pool, &amp; Qualter (2012)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SSE</td>
<td>1=strongly disagree 5=strongly agree</td>
<td>6</td>
<td>Choi, Kluemper, &amp; Sauley (2012)</td>
</tr>
<tr>
<td></td>
<td>The degree to which a person feels a sense of confidence regarding social interactions</td>
<td>SSCI</td>
<td>1=no confidence at all 5=complete confidence</td>
<td>10</td>
<td>Sherer et al. (1982)</td>
</tr>
<tr>
<td></td>
<td>Confidence in the ability to help, nurture, care for others, teach and instruct</td>
<td>PSSE</td>
<td>1=no confidence at all 5=complete confidence</td>
<td>25</td>
<td>Betz, Harmon, &amp; Borgen (1996)</td>
</tr>
<tr>
<td>Work place social self-efficacy</td>
<td>An individual’s confidence in his or her ability to engage in the social interactions necessary to initiate and maintain interpersonal relationships</td>
<td>WSSE</td>
<td>0=no confidence 100=complete confidence</td>
<td>22</td>
<td>Smith &amp; Betz (2000)</td>
</tr>
<tr>
<td></td>
<td>An employee’s confidence in his or her ability to engage in job-related social interactional tasks and to develop and maintain effective interpersonal relationships with other employees in his or her organization</td>
<td>WSSE</td>
<td>0=no confidence 100=complete confidence</td>
<td>22</td>
<td>Fan et al. (2012)</td>
</tr>
</tbody>
</table>

Note:  
*a* Subscale of the Generalized Self-Efficacy Scale,  
*b* Social Skills Subscale of the Skills Confidence Inventory
Appendix B

Items for the Self-efficacy Scales used in Study II-IV

*Occupational Social self-efficacy Scale*
7…start a conversation at work with someone you don’t know very well
8…ask someone at work for help when you need it
9…get people in your work group to listen to your opinion
10…cooperate with people at work who see things differently than you
11…manage a conflict situation with people at work

*Occupational Emotional Self-efficacy Scale*

**Self-oriented**
12…correctly identify your own negative emotions at work
13…know what causes you to feel a negative emotion at work
14…tackle your negative emotions at work
15…get into the mood that best suits the situation at work

**Other-oriented**
16…correctly identify when other people are feeling negative emotions at work
17…realize what causes other people to feel negative emotions at work
18…help other people at work tackle their negative emotions
19…help other people at work get into the mood that best suit the situation

*Occupational Self-efficacy Scale*
1 I can remain calm when facing difficulties in my job because I can rely on my abilities
2 When I am confronted with a problem in my job, I can usually find several solutions
3 Whatever comes my way in my job, I can usually handle it
4 My past experiences in my job have prepared me well for my occupational future
5 I meet the goals that I set for myself in my job
6 I feel prepared for most of the demands in my job

*Note.* Directions for items 7-19: Please read each statement carefully. Then state to what extent you have confidence in your ability to…

For items 1-6 a 7-level confidence scale are used: 1 (strongly disagree) to 7 (strongly agree), and for items 7-19 a 5-level confidence scale are used: (0) No Confidence at all (1) little Confidence (2) Moderate Confidence (3) Much Confidence (4) Complete Confidence.