



Striving for self-esteem

Conceptualizations and role in burnout

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To my family - for filling
my life with so much joy!

Abstract

When self-esteem is dependent on competence individuals invest a great deal of effort in their accomplishments in order to validate themselves. The aim of the present thesis was to develop a theoretically sound and valid concept and measure of contingent self-esteem dependent on competence, and examine its vulnerable implications and role in burnout. In Study I a concept and measure of contingent self-esteem dependent on competence, termed competence-based self-esteem (CBSE), was developed. Confirmatory factor analyses showed its distinctiveness from other sources of self-esteem and revealed two dimensions comprising behaviors referring to: i) Self-esteem conditional upon competence and ii) Frustrated self-critical strivings. The new scale showed high reliability and gained both convergent and discriminative validity through different methods in different samples. Study II set out to experimentally test the vulnerable implications of CBSE in a performance situation. The results showed that high, as compared to low, scorers on the scale exhibited stronger physiological reactivity and momentary exertion coupled with frustrated mood. Study III focused on the role of self-esteem contingent on competence in the burnout process and its association with work- and private-life stressors over time in working women and men. The analyses showed that contingent self-esteem was a predictor of burnout. In addition, women scored higher on both contingent self-esteem and burnout and reported higher general life stress than did men, whereas men showed stronger associations between work stressors and burnout. The results of the three studies suggest that contingent self-esteem, where outcomes of one's acts and performance serve to compensate an impoverished basic self-worth, facilitates the understanding of stress-related vulnerability and ill-health.

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List of Studies

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Introduction

A growing focus on individuality and achievements is considered a major factor underlying the rise of stress-related health problems, particularly in young people in Sweden (Swedish Ministry of Education, Research and Culture, 2006). In this respect, Beck and Beck-Gernstein (2002) have posed that the ethic of individual self-fulfillment and achievement is the most powerful current in modern society. This focus is suggested to promote increased demands and pressure in people to gain social recognition through accomplishments. Accordingly, as one's worth as an individual must be demonstrated, proven, or earned the result is increased strivings for self-esteem. The present thesis focuses on contingent self-esteem referring to self-worth dependent on external sources. This kind of conditional self-view is considered vulnerable with consequences for wellbeing (Crocker & Wolfe, 2001). In particular, people whose self-esteem is defined by achievements are compelled to invest a great deal of effort in their work. This strong involvement is likely to incline to stress and health problems such as burnout (Albertsen, Rugulies, Garde, & Burr, 2010; Hallsten, 2005).

The aim of the thesis

The aim of the present thesis is to develop a theoretically sound concept and measure of self-esteem dependent on competence, as well as to investigate its vulnerable implications and role in burnout in working women and men in relation to environmental stressors.

There are three specific aims: i) To develop a valid concept and measure of self-esteem dependent on competence, based on established self-esteem theory; ii) To experimentally test the vulnerable implication of the new construct and scale of self-esteem by investigating the physiological and behavioral reactivity of this disposition in a performance situation; iii) To investigate the role of self-esteem dependent

on competence in the burnout process and its association with work and private-life stressors over time in working women and men.

The new concept developed in Studies I and II is termed competence-based self-esteem. Study III utilizes a concept termed performance-based self-esteem.

Demands in today's working life

In contemporary western working life, individuals' internalization of demands and achievement strivings are fuelled by a working life with unclear boundaries and in which the individual has an increased responsibility over where, when and how to work (Allvin, 2008; Allvin, Aronsson, Hagström, Johansson, & Lundberg, 2005). The positive aspects of modern working life have been found to involve increased freedom and high individual influence and flexibility. The negative aspects can include a lack of well defined goals and unclear work roles, which leads to a situation in which the employee does not know when the work is good enough and what is expected of her (Hellgren, Sverke, & Näswall, 2008; Härenstam et al., 2005). In addition, there seems to be less time for support, reflection and exchange of experience as a result of increased work intensity, outsourcing trends and result-orientated management systems (Allvin & Aronsson, 2003).

In a working life with less structured work, carried out anywhere at any time of the day, the individual has to draw her own boundaries between work and family and determining when the work is good enough, as well as decide what is included in her work role. These new demands individuals face are supposedly internalized by those who put higher and more ambitious demands on themselves to be high-performing in all spheres in life.

As a consequence, individual characteristics are considered to be of increased importance in today's working life, where for example overachievers and workaholics risk pushing themselves too hard and put their own health at risk. In particular, stress-related health problems like burnout, are considered potential health risks (Allvin et al., 2005). Furthermore, as the individual increasingly defines her own work tasks, goals and demands, individual characteristics become important when studying work-related stress problems. In this respect, in order to benefit from the new work life, one needs to be creative, social, able to carry one's own competence, open to changes and, not

least, be able to draw one's own limits (Allvin et al., 2005; Hellgren et al., 2008).

Therefore, individual characteristics such as self-esteem staked on competence and excessive performance orientation are considered increasingly important to examine further as explanations of stress-related ill-health in today's society. The present thesis focuses on conceptualizing self-worth staked on achievements as well as investigating its implications and role in stress reactivity and burnout in women and men. Therefore, it was considered important to introduce a review of stress and health including gender-related aspects.

Stress and health

Most stress definitions focus on the notion of balance and the idea of returning to a state of psychological or physiological balance via behavioral or psychological responses. If an individual is exposed to the stressors for a shorter time, which is followed by a period of lower stress and recovery, there is usually nothing harmful about this. It can even be beneficial and improve performance as the cognitive functions, such as memory and concentration, are improved. However, when the stress exposure continues for a longer period with a lack of recovery the body reacts in the opposite way, with impaired cognitive functioning as well as worsened immune functioning and various physiological symptoms (Lundberg, 2005; McEwen, 2004). A particularly important component in the stress mechanism is the ability to shut off worries concerning past and future activities, as worries keep the stress on a higher level even if one is not objectively exposed to the stressors (Sapolsky, 1994).

Whether or not the stressful situation has negative health effects on the individual depends on a complex interaction between developmental, environmental, genetic, physiological, personality and behavioral factors (McEwen, 2004). But it also depends on an individual's evaluation of the value of a specific situation (e.g., if achievement is important for a person's self-esteem, she is particularly stressed by failure) as well as available internal and external resources for handling the situation. This subjective appraisal of one's ability to handle a situation determines the cognitive-motivational actions, such as avoidance of the situation or active problem-solving, referred to as coping strategies (Lazarus & Folkman, 1984). Situations perceived as threatening to one's self-worth are particularly psychologically stressful (DiPaula & Campbell, 2002).

The physiology of stress and health

If a situation is perceived as stressful, a physiological reaction is set into motion, with increased activity of different bodily systems. The physiological link between stress and health goes through two fundamental body systems, the sympathetic-adrenomedullary (SAM) system and the hypothalamic-pituitary-adrenocortical (HPA) system. Acute stress and anxiety activate the SAM system, which stimulates cardiovascular activity with the secretion of epinephrine and norepinephrine (Lundberg & Cooper, 2010). This is adaptive and increase the individual's readiness to respond to and act on a stressful situation. However, stress also activates the HPA system and releases corticosteroids from the adrenal cortex, increasing the levels of triglycerides, cortisol and cholesterol in the blood. This reinforces the SAM reaction. Over time, a prolonged physiological activity is considered to wear down bodily resources (McEwen, 2002). As a consequence, individual health and well-being is compromised and the risk for negative health effects, including burnout, increases. As for burnout, associations have been found with cortisol (Melamed et al., 1999), cholesterol, lipoprotein and glucose (Melamed et al., 1992), known physiological risk factors for cardiovascular disease.

The cardiovascular system consists of the heart, the systemic circulation and the pulmonary circulation, of which the primarily function is to supply blood and thereby oxygen, nutrients and substances like hormones to different organs in the body. The most commonly measured cardiovascular responses to stress are elevated systolic and diastolic blood pressure and heart rate, but also arterial pressure and heart rate variability. When blood is pumped from the heart into circulation, it creates a blood pressure on its journey through the body before returning to the heart. The peak of the pressure is called systolic blood pressure and the lowest level that is followed by this peak is referred to as diastolic blood pressure (Lundberg & Cooper, 2010). During normal conditions, both heart rate and blood pressure are highest during the day at work, lower at home and lowest during sleep, and are highly affected by physical activity and body posture.

Stress and health in women and men

Women are over-represented in stress-related health problems in Sweden (Swedish National Board of Health and Welfare, 2009). This is

sometimes explained by the fact that women are more willing to seek treatment than men. An additional explanation for women's higher prevalence of stress-related health problems is women's and men's unequal amounts of total workload. Studies from various countries show that unpaid work at home is often not equally divided between men and women, which has the effect that women have a higher total workload (in total 10-20 hours more per week) than men (Lundberg, 2005). Men are also more satisfied than women with how they perform these duties. Studies of the variation in stress hormones during the day showed that they typically decrease in men upon leaving work, while women's stress hormones increase when they get home (Lundberg & Frankenhaeuser, 1999). Women also experience more conflicts in combining housework and paid work, which often results in their choosing to work part time more than men, as they have to reduce their total workload to reach an adequate level of work hours. This has been found to be related to self-esteem, with the total amount of workload associated with a lower level of self-acceptance in women but not in men (Lindfors et al., 2006).

Apart from a longer work week for women due to double work, women's work tends to be characterized by less control, more routine work, lower pay and lower positions in an organization compared to men (Alexanderson & Östlin, 2000). Another study showed that women experienced less autonomy and described their work situation as more regulated than men (Torkelson, Muhonen, & Pieró, 2007). Women also experience more stress due to lack of communication and lack of support from their supervisor (Lundberg & Frankenhaeuser, 1999).

Explanations for women's and men's different stress-related health problems could also be that women are exposed to more stressors in working as well as private life, and perhaps react and pay attention to other aspects in life than men (Lundberg, 2005). Similarly, Perski (2006) states that women react to stressors not only at work but also at home, in relationships and within the family, while men's stress reactions mainly concern work stressors.

Indeed, women perceive that there are higher expectations on them to be high-performing at work as well as in their parental role (Lundberg, 2005). This particularly applies to highly educated women, who constitute an increasingly pronounced risk group today. They have a

higher sickness absence than highly educated men do (Renstig & Sandmark, 2005), and in a Dutch population-based study the highest prevalence of work-related fatigue was found in highly educated women (Verdonk et al., 2010). One suggested explanation for this over-representation of stress-related ill-health in highly educated women is that many of them feel they must outperform men to prove their competence and worth (Löve, 2010). It is also plausible that women's self-worth is linked to their performance to a higher extent than is the case for men (Hallsten et al., 2005). That women stake their self-worth on achievements and want to outperform men can contribute to the understanding of women being over-represented in stress-related ill-health, such as burnout.

Burnout

A common definition of burnout is that it is a process that results from a difficult work situation and a high work involvement, combined with limited possibilities for the individual to adjust to the circumstances (Schaufeli & Enzman, 1998). In Sweden, the term burnout [utbrändhet] is used for people still at work, not on sick leave, and thus concerns symptoms of burnout and the process more than the final stage when the individual no longer has the ability to work. This is thus separate from exhaustion syndrome [utmattningsyndrom], which is included in the Swedish version of the disease classification system. Burnout is the most common concept within the research field of work and organizational psychology, whereas exhaustion syndrome is mostly used in the field of clinical psychology. The present thesis focuses on burnout in the work context and on the interaction between work and the individual, and thus the concept of burnout is used rather than exhaustion syndrome.

Burnout symptoms involve various physical and psychological symptoms such as headache, shoulder pain, withdrawal tendencies, concentration problems and memory loss. The burnout process can vary widely between individuals but typically continues for many years. It often starts with physical tiredness and continues to cognitive problems (e.g., memory loss and concentration problems), through sleeping problems and behavioral changes, sometimes with depression-like symptoms. It has been pointed out that the burnout phases spread out and that the symptoms are maximized the longer time goes on (Taris, Schreurs, & Schaufeli, 1999). The final 'breakdown' then comes after many years, which means that an individual must ignore the body signals effectively throughout the whole process in order to reach the final stage.

As a phenomenon burnout has existed for decades, albeit under different forms. During Industrialization when people had to face many, and fundamentally different, demands in work and society, the number of

people with burnout symptoms increased dramatically (Johannison, 1994). However, it was not until the 1970s that the label of burnout was developed by Christina Maslach and Herbert Freudenberger, almost at the same time but independent of each other. Maslach defined burnout as a syndrome including three dimensions, namely emotional exhaustion, depersonalization and reduced personal accomplishment, that can occur among individuals who work with people (Maslach, 1976). The definition and related measure the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) made it possible to study the phenomenon quantitatively in relation to other work-related aspects in large samples. According to Maslach and Leiter (2008), burnout is a long-term response to chronic emotional and interpersonal stressors in relation to work, meaning that it particularly affects individuals working within the service sector.

Even though Maslach's definition of and theory on burnout are the most commonly applied, there are also other perspectives. Pines (1993) offers an existential perspective, defining burnout as a crisis people experience when they feel they have failed in an important domain in life that previously made them burn for their work. Pines and Aronsson (1988) apply a broader definition of burnout than Maslach, and argue that burnout can exist in any context, such as marriage and studies. They include physical, emotional and mental exhaustion in the concept, where physical exhaustion involves low energy, chronic fatigue, weakness and a number of physical and psychosomatic complaints. Emotional exhaustion describes feelings of helplessness, hopelessness and entrapment, which can lead to emotional breakdown. Finally, mental exhaustion refers to the development of negative attitudes toward oneself, work and life itself. The Pines Burnout Measure (Pines BM; Pines, Aronson, & Kafry, 1981) assesses burnout with 21 adjectives indicating emotions and opinions such as "emotionally exhausted", 'tired', 'empty inside', 'energetic' (reversed), and is answered on a seven-point scale ranging from 'never' to 'always'. The Pines BM has been found to have good internal consistency and high construct validity, and its composite score correlates substantially with the exhaustion dimension of the MBI (Enzmann et al., 1998; Shirom & Ezrachi, 2003), which has been held as the central aspect of burnout (Peterson, 2008). Further, the MBI and Pines BM have been found to distinguish equally well between burned-out and non-burned-out individuals (Schaufeli et al., 2001).

Similarly, according to Hallsten's (2005) self-worth perspective, burnout is a process that can occur in any context in which strong long-term involvement exists, not only in work contexts. Hallsten divides the burnout process into three phases. The first phase is absorbing engagement in work or some other aspect in life, which continues to the second phase of frustration if the person is hindered from reaching her goals in a domain that is important to her. Eventually the process leads to the last phase of burnout if the individual pushes herself so that the burnout process progresses. However, if the individual gets opportunities and help to restructure and redefine her behavior and way of thinking, she can avoid the negative outcome of burnout and instead lead the process to a positive outcome of maturation and individual development. The present thesis draws on the perspectives on burnout provided by Ayala Pines and Lennart Hallsten.

Burnout has been found to be prospectively associated with a number of important negative outcomes such as poor job performance (Wright & Cropanzano, 1998), psychological ill-health (McManus, Winder, & Gordon, 2002), physical ill-health (Melamed et al., 2006), self-reported sickness absence (Borritz et al., 2006), long-term sickness absence (Hallsten et al., 2011), intent to leave the profession (Estryn-Béhar et al., 2007), suicidal ideation (Dyrbye et al., 2008), and all-cause mortality (Ahola, 2010). Also, links to cardiovascular risk factors, such as cholesterol, lipoprotein and glucose, have been found (Melamed et al., 1999; Melamed et al., 1992). As burnout has been associated with serious outcomes, it is important to investigate its potential explanations.

Explanations for burnout

Explanations for burnout can be divided into societal, work and individual levels. The approach to burnout involved in the present thesis lies on the individual level in terms of self-esteem and the individual's interactions with her work context.

The great increase in the number of people with burnout symptoms during the two last turns of the century (late 1800s and 1900s) tells us that great changes in the societal climate seem to affect people's burnout reactions (Johannison, 1994). However, the most studied factor

associated with burnout is the individual's work context. Maslach and her colleagues argue that burnout is a strictly work-related phenomenon and state that the responsibility should be put on employers to prevent burnout in their employees, rather than on the employees themselves. They have identified six work-related indicators that most strongly relate to burnout across different studies: person-job fit, role and goal ambiguity, qualitative and quantitative workload, justice, reorganization and support (Schaufeli & Enzmann, 1998).

Several models have been developed to study psychosocial risk factors for stress. Influential models in burnout research are the job demands-resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and the job demand-control model, (Karasek, 1979; Karasek & Theorell, 1990). According to Karasek and Theorell's (1990) job demand-control model, an imbalance between levels of decision latitude (control over one's own work and skills) and demands (qualitative and quantitative), as well as lack of social support, is associated with elevated distress and ill-health. Within the framework of the job demands-resources model, several authors have argued that burnout results from a mismatch between job demands and job resources (e.g. Demerouti et al., 2001). With regard to burnout measured with the MBI, job demands (such as work overload and demanding clients) are most strongly and positively related to feelings of exhaustion (as compared to the two other components), whereas job resources (such as social support, job control and performance feedback) are most strongly and negatively related to cynicism (Demerouti et al., 2001; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

Despite the argument that burnout is a work-related syndrome, there is a widespread idea that it typically affects people who have a high initial engagement in work and that it is the result of a mismatch between the individual and her work (Hallsten, 2005; Pines, 1993; Siegrist, 1996). This suggests that individual factors are not unimportant in explanations of burnout reactions and should be acknowledged in order to combat burnout. Indeed, Fischer (1983) conceives burnout primarily as an intra-psychoic phenomenon that only needs an external trigger, or not even that much, to get under way. The repeatedly found consistent nature of burnout, being remarkably stable over time, has evoked the idea that it is highly affected by the individual's personality or even genes (Middeldorp et al., 2006). Burisch (2002) shows that both dispositions such as the host of feeling, acting, thinking, and cop-

ing tendencies as well as work situations have support for explaining burnout. However, relatively few studies involve the individual factors in the etiology of burnout. A few studies have shown mixed results concerning demographic factors such as age, gender and socioeconomic status. For instance, based on MBI ratings, women have generally shown higher levels of emotional exhaustion while men have higher scores in cynicism (Schaufeli & Enzmann, 1998). Further, burnout typically affects younger people in their first years of work experience (Perski, 2006; Schaufeli & Enzmann, 1998). As regards personality, a recent meta-analysis by Alarcon, Eschlean, and Bowling (2009) of the relationship between personality variables and burnout showed that some personality characteristics such as self-esteem and locus of control were significantly related to burnout. In addition, the Big Five personality factors predicted components of burnout beyond the effects of role stressors. The authors recommend that personality variables in future research be included as predictors of burnout.

High work involvement in burnout – the role of self-esteem

Several researchers have suggested that high work involvement and compelling inner demands to perform well contribute to burnout. However, few studies further investigate or conceptualize implications of this high work involvement and place it in a theoretical framework to identify those at risk for burnout.

In the 1960s, several studies showed that individuals with high job involvement and who hold work as a central life interest are more likely candidates for emotional exhaustion because they view their work and its consequences as extremely important (Dubin, 1956; Lodahl & Kejner, 1965). Similarly, in an early study, Maslach (1976) concluded that expectations of achievement are key factors in the burnout process and suggested that those who burn out tend to be overachievers who have unrealistic expectations regarding work, and are typically younger employees. Individuals may also generate high demands from the organization they work in so that work challenges, rewards, and career advancement may create intrinsic demand stress. Further, Maslach and Jackson (1984) concluded that individuals with high achievement expectations, defined as the individuals' inner de-

mands, run the highest risk for burnout. Siegrist (1996) put forth a similar idea, stating that individuals who invest a great deal of energy into their work due to some intrinsic behavior patterns and/or personality traits are particularly affected by a perceived gap between expectations and outcome. Indeed, Pines' metaphorical statement that "in order to burn out, one has first to be on fire" (1993, p. 41) puts these assumptions into one phrase: the root cause of burnout lies in people's need to believe that the things they do are useful and important, which makes them burn for their work. When they feel they have failed, they start feeling helpless and hopeless, and eventually burn out (Pines, 1993).

The existential perspective of Pines differs from that of Hallsten (2005), who proposes that the vulnerability to burnout lies in people's self-esteem strivings and thus the primary risk group comprises people who base their self-value on their achievements. That self-worth protection is involved in the burnout process is an important distinction from Pines' perspective. His theory does not concern people who want to do meaningful work for the sake of society or for other people, but rather those whose self-esteem is invested in their achievements in a self-definitional role, which influences their goal orientation by making it intense, rigid and misdirected. This is considered to be manifested in a behavior pattern that involves difficulty saying no to work tasks and setting limits for oneself, resulting in an exaggerated achievement struggle (Hallsten et al., 2002).

Recently, Holmgren (2008) found that these individual characteristics, difficulty saying no to work tasks and high compelling inner demands on oneself, are important in the burnout process. It was found that high perceived stress arose from compelling inner demands and that commitment predicted self-rated symptoms better than perceived stress owing to indistinct organization and conflicts. This was also supported in her interview study, in which sick-listed women reported that the most important contributing factors to their stress-related ill-health were the individual characteristics of having a high sense of responsibility, difficulty setting limits and putting too high demands on themselves. These characteristics have also been found to be common in individuals diagnosed with exhaustion syndrome (the Swedish diagnosis for severe burnout), and is considered important to address in the rehabilitation process (Perski, 2006). Similarly, Gustafsson and colleagues (2008, 2009) showed that being burned out involves being

torn between what one wants to manage and what one can actually manage. These studies indicate that one's ideals become inner demands on one's own performance and to show that one is capable and independent. It also means that being dissatisfied with oneself involves both a failure to live up to one's own ideals and being disappointed in others for not providing the confirmation one strives for. Becoming and being burned out, thus, leads to a futile struggle within the individual to live up to one's own ideals and, when failing to unite that ideal picture with one's reality, the individual finally reaches an overwhelming feebleness.

On these grounds, an excessive involvement in work and a particularly high focus on achievements evolving from the individual's strivings for self-worth seem to comprise a prominent ingredient of the burnout process. The majority of the empirical studies in the present thesis concern theoretical and conceptual aspects of contingent self-esteem staked on competence due to the stress-related implications of this predisposition and relevance for burnout (Crocker & Park, 2004; Hallsten, 2005).

Self-esteem

Self-esteem is intimately connected to our entire being, and possessing self-esteem is in the western countries considered one of the most important social needs (Sheldon, Elliot, Kim, & Kasser, 2001). Indeed, the importance of self-esteem and its implications on health and well-being is well documented (see Kernis, 2006 for a review). For instance, individuals with low self-esteem have been found to suffer from poorer mental and physical health (Solomon, 2006), to be more vulnerable to stress reactions, both psychologically and physiologically (Crocker & Park, 2004), and to perform more poorly (Crocker & Luthanen, 2003) in comparison with those with high self-esteem.

A common argument is that self-esteem is a superordinate variable that relates to almost any individual factor, and is therefore considered to be a more confounding than clarifying factor in studies. However, recent approaches concern different aspects of self-esteem beyond possessing high or low global self-esteem (Crocker & Wolfe, 2001; Forsman & Johnson, 1996; Paradise & Kernis, 2002). Instead, the approaches focusing on stability and motivational aspects of self-esteem suggest that self-esteem is a complex phenomenon constituted by different aspects, which are related to different outcomes and have different origins.¹

Self-esteem can be considered a trait, that is, a passively received fundament for self-esteem (Cooley, 1902; Rogers, 1951). It can also be

¹ There are common misunderstandings of the relations between different concepts that lie very close to self-esteem. First, a person's *self-concept* [*självuppfattning*] is an individual's cognitive picture of him/herself. It involves an appraisal, as you can have a negative or positive self-concept. A positive self-concept is a description of oneself in a beneficial light, such as being bright, good looking and humble. A person's *self-confidence* [*självförtroende*] is related to what we do, and is a situation-specific and changeable aspect of the self. It is related to a domain, such as high confidence in doing math but low in meeting new people. Further, *self-assurance* [*självssäkerhet*] is an attitude and a way of behaving. A person with high self-assurance can have deficient self-esteem, whereas a shy and withdrawn person can have high and genuine self-esteem. Finally, *self-esteem* [*självkänsla*] can be defined as a subjective, affective-experiential aspect of the self that forms an emotionally loaded part of the self (Johnson, 2003; Forsman & Johnson, 1996).

seen as actively earned self-esteem through acts (Forsman & Johnson, 1996; Franks & Marolla, 1976). The most common conceptualization of self-esteem is *global self-esteem*, defined as the individual's positive or negative attitude toward the self as a totality (Tafarodi & Swann, 1995). A person with high self-esteem has self-respect and considers herself a person of worth, whereas a person with low self-esteem lacks respect for herself and considers herself unworthy, inadequate or otherwise seriously deficient as a person (Rosenberg, 1965). However, to understand the behavioral and health relevance of self-esteem, models of self-esteem have been developed beyond global self-esteem (Crocker & Park, 2004; Johnson & Forsman, 1996; Kernis, 2006).

For instance, Kernis and colleagues (1993) propose that a high level of self-esteem can be misleading as one must take into consideration the person's *stability of self-esteem* to understand well-being. In this view, high but unstable self-esteem is greatly affected by context and could thus be reduced by some contextual trigger and instead be reported as low in the next assessment. Kernis and Washull (1995) argue that one has to consider a person's self-esteem stability as this kind of fluctuation is a better predictor of health outcomes than is level of self-esteem (Kernis et al., 1993). A particular kind of unstable self-esteem is *contingent self-esteem*, which refers to self-esteem based on perceived successes or failures in the domain to which the person's self-esteem is attached (Crocker & Wolfe, 2001; Ryan & Deci, 2000). There is broad agreement that deriving self-esteem from external sources, such as emotional support, others' approval or competence, is an unreliable and vulnerable basis for self-esteem as it constitutes a highly unstable self-esteem that fluctuates with success and failure (Crocker, 2001; Johnson & Forsman, 1995; Paradise & Kernis, 2002). Particularly for people who lack a *non-contingent*, basic sense of self-worth (Deci & Ryan, 1995; Forsman & Johnson, 1996; Rogers, 1951), the need to strive for self-esteem is constantly an issue. These individuals define their whole self-value by external standards, and are therefore predisposed to an incessant pursuit of self-value as compensation for their low basic self-esteem. Consequently, such contingencies are unreliable as a basis of self-worth and create vulnerable self-esteem (Crocker, 2001; Crocker & Wolfe, 2001; Paradise & Kernis, 2002).

Non-contingent self-esteem

Non-contingent self-esteem refers to an affective-experiential perception of oneself that originates in early childhood (Rogers, 1951; Ryan & Deci, 2000). On this basis, to separate the essence of self-esteem from its correlates such as competence, Forsman and Johnson (1996) developed the concept and measure of basic self-esteem. This refers to a stable, non-contingent, affective-experiential aspect of self-esteem, acquired in infancy through parents' unconditional love and a secure attachment pattern (Bowlby, 1980; Johnson 1998; Rogers, 1951). The adult is relatively unaware of her own level of basic self-esteem, but the basic aspect has been found to be important in behavior regulation and, in particular, to be decisive in the role of competence as an indicator of self-worth (Johnson & Forsman, 1995).

Deci and Ryan (1995) have a similar reasoning about self-esteem. They state that when acceptance and love are given conditionally, the individual is inhibited in her development toward an integrated personality whereby the manifest behavior is in accordance with the real self. Instead of a genuine self, a social self develops, and the individual puts herself in a social role in which some parts of her personality are repressed. This has the consequence that the individual develops a deficient non-contingent self-esteem. Both Forsman and Johnson (1996) and Deci and Ryan (1995) argue that when basic true self-esteem is impoverished, the individual is impelled to validate the self-worth with achievements or others' love and approval.

Contingent self-esteem

Contingent self-esteem refers to a self-worth dependent upon meeting standards in a certain domain and the individual's pursuits to validate the self by external means (Crocker & Wolfe, 2001; Ryan & Deci, 2000). This stands in contrast to the stable and trait-like self-esteem that is traditionally referred to. People with high contingent self-esteem regard themselves as highly competent and worthy of love, and therefore generally feel good about themselves, when they feel they are meeting their performance standards or are emotionally reassured by others. However, when they fail or are rejected they feel very disapproving of themselves. This can produce exaggerated achieving

or reassurance-seeking (Epstein, 1989). Individuals with contingent self-esteem are preoccupied with how they are viewed by others, and continually engage in setting and meeting evaluative standards to validate their feelings of self-worth (Paradise & Kernis, 2002).

Different approaches have been applied to capture contingent self-esteem and the pursuits to attain self-worth. For instance, in their studies of both level and type of self-esteem, Kernis and Goldman (2006) have developed a scale for contingent self-esteem that assesses the extent to which individuals' self-worth depends upon meeting expectations, matching standards or achieving specific outcomes. A similar line of thinking about performance and achievement orientations as vulnerability factors for mental ill-health is found in Dykman's (1998) self-validation model for depression. He suggests that depression-prone individuals primarily seek self-validation rather than growth and self-improvement. An additional approach to contingent self-esteem is offered by the concept of performance-based self-esteem (PBSE) (Hallsten et al., 2002), which is used in Study III in the present thesis. This concept is inductively derived from burned-out individuals' qualitative descriptions of their thoughts and behaviors as regards work and achievements. It therefore captures the characteristic cognitions, emotions and motivations of individuals who suffer from burnout.

Contingent self-esteem and self-validation strivings have also been argued to be a part of various personality and motivational orientations. For instance, it has been suggested that contingent self-esteem, together with sensitivity to mistakes and a need for admiration, constitute important aspects of perfectionism (Rice & Preusser, 2002). Further, Price (1982) proposed that the core of the toxic Type-A behavior lies in the individual's concern for self-worth, namely the belief that one must constantly prove oneself through achievements or else risk the accompanying fear of being judged unworthy. Similarly, self-worth protection is involved theoretically in self-determination theory by Deci and Ryan (1995), including the concept of introjected regulation, meaning that one acts as a consequence of raising one's self-esteem or avoiding shame or guilt. Further, overcommitment refers to a motivational pattern characterized by excessive work-related commitment and a high need for approval (Siegrist et al., 2004).

Crocker and Wolfe (2001) have also investigated self-esteem contingency and maintain that contingent self-esteem fluctuates around a

trait level of global self-esteem in the domains in which the individual invests her self-esteem, for example moral virtue, personal relationships or competence areas. According to Crocker and her colleagues (2001, 2006), all individuals pursue contingent self-esteem, but in different domains. They ignore what the basis of vulnerability is in contingent self-esteem, and also reject the viewpoint that there is a non-contingent or basic trait like self-esteem acquired in childhood, that differs in level between individuals and motivates their pursuits.

In this respect, other studies have shown that the core of vulnerability in contingent self-esteem lies in a deficient level of basic self-esteem, as a result of a lack of unconditional love and support in early childhood (Johnson, 2002, 2010). Johnson and Forsman (1995) experimentally demonstrated that the role of competence for an individual differs depending on the level of basic (non-contingent) self-esteem. It is only when a person's self-esteem is *defined* by external determinants such as others' love or her own perfection that it is truly contingent and thus entails vulnerability in her self-related pursuits. Consequently, high basic self-esteem combined with a need to enhance self-esteem through external sources does not constitute a vulnerable disposition, as the basic self-esteem functions as a buffer to failure (Johnson & Forsman, 1995). This combination results in a more stable self-esteem as the self-value is not dependent on these sources.

To complement earlier approaches to contingent self-esteem, it is considered valuable to develop a concept and measure through careful theoretical consideration gained from empirical evidence. There is a particular need to theoretically formulate what makes contingent self-esteem vulnerable or not. Therefore, to complement the picture of contingent self-esteem, two scales measuring distinctive aspects of contingent self-esteem were developed within the present thesis, one based on relationships and one on achievements (of which the latter is the main focus in the thesis). The theoretical underpinning in both concepts is an impoverished basic self-esteem through which vulnerable behaviors and attitudes arise. The contingent self-esteem constructs developed here do not refer to self-esteem level but rather to behaviors and attitudes arising from the need to compensate for low basic self-esteem by meeting external standards in a life domain important to the individual. On these grounds, it is not considered vulnerable to be a high achiever as such, but rather to be impelled to achievement strivings or reassurance-seeking to chronically compen-

sate for deficient basic self-esteem.

Competence-based self-esteem

A particularly high vulnerability is assumed to arise in individuals who base their self-value on success and perfection (Crocker & Park, 2004; Di Paula & Campbell, 2002; Paradise & Kernis, 2002). In this thesis a concept labeled competence-based self-esteem (CBSE) is developed, referring to contingent self-esteem dependent on competence. In this conceptualization the theoretical underpinning is low basic self-esteem, which the person strives to compensate for through excessive strivings for success and perfection. In this matter, competence-based self-esteem complements previous approaches to contingent self-esteem, in which the vulnerability basis of contingent self-esteem is unclear. The concept and scale developed in the present thesis refer to behaviors and attitudes arising from these competence pursuits to compensate for a low basic self-love.

Low basic self-esteem is considered to constitute the essence of vulnerability as it compels the individual to maladaptive chronic patterns of behavior including excessive self-criticism and harsh attitudes toward one's own failures (Johnson, & Forsman, 1995). The positive feedback striven for and possibly received leads only to a temporary increase in self-esteem because the deficient level of basic self-esteem does not allow the individual to fully accept the praise she has worked so hard for (Johnson & Forsman, 1995). In the face of failure or negative criticism self-esteem decreases, which makes competence-based self-esteem a highly unstable form of self-esteem, fluctuating along with mistakes and success. This unstable self-worth and the continuous strive to compensate for low basic self-esteem result in a particular behavior and attitude pattern. The combination of low basic self-esteem and high competence needs in gaining self-esteem has been shown to lead to over-ambition and an ignoring of one's physical and mental limits (Johnson & Forsman, 1995). These individuals also show high emotional tension and feelings of frustration in performance situations, maladaptive strivings, strong control needs, perfectionism and a hostile attitude (Forsman & Johnson, 1996; Johnson & Forsman, 1995; Koivula, Hassmén, & Fallby, 2002).

Origins of competence-based self-esteem

The main focus in self-esteem research has been on self-esteem as developed in the early years through the interaction between the parent (mainly the mother) and the child. A common assumption is that self-esteem is a stable trait founded early in life through socialization experiences or genetic factors. The main focus in clinical treatment for low self-esteem has therefore been on relationships in the patient's childhood. From the perspective on CBSE as having its roots in a deficient non-contingent basic self-esteem (Forsman & Johnson, 1996), its foundation can be explained by the person's early experiences in childhood. However, the compensation-seeking pattern, whereby the individual chronically strives to earn self-esteem through doings is likely to be not only formed early in life but also modified later by the context in which the individual acts.

Conditional love refers to love and affection that is provided only when the child displays particular behaviors and standards or attributes, and is withheld when the child does not. There are advocates of this approach as a socializing practice as it can promote desired behaviors. However, it does so with significant affective costs (Assor, Roth, & Deci, 2004). Among the costs, parents' conditional regard will lead children to develop conditional self-esteem and regulate their behavior accordingly (Rogers, 1951; Baldwin & Sinclair, 1996; Deci & Ryan, 1995, Harter, 1993). Children's perception of their acceptance being dependent on their performance is in turn related to low self-esteem and vulnerable self-esteem, and as a consequence to greater defensiveness, poor impulse control and depression as well as ambivalent feelings toward their parents (Baldwin & Sinclair, 1996; Barber, 1996; Coopersmith, 1967; Chapman & Zahn-Waxler, 1982; Roger, 1951; Schimel, Arndt, Pyszczynski, & Greenberg, 2001).

Object Relations Theory offers another approach to the origins of both low trait self-esteem and contingent self-esteem. According to this perspective a child's experiences are divided into two emotional qualities, good and bad. When the good is dominant, the self has been loaded with sufficient narcissism and an affective cognitive structure is acquired. If bad dominates, the structure mirrors the individual as non-lovable and she will remain in a relatively constant state of needing to re-form these structures. One solution could be to fill the vacuum with the love and admiration of others, often sought through

excellent performance or perfection later in life (i.e. to compensate for the lack of basic self-esteem through achievement, the second part of the competence-based self-esteem concept). The result is unstable and low self-esteem, which is highly sensitive and vulnerable to failures and criticism (Klein, 1948; Kohut, 1971), that is, contingent self-esteem such as competence-based self-esteem.

The compensatory nature of competence-based self-esteem is also considered to evolve if parents see the child as an extension of themselves and transfer and project their own expectations on her. As a consequence, the child's own accomplishments serve to vicariously raise the parents' self-worth. Deci, Koestner, and Ryan (1999) offer an explanation of the acquisition of competence-based self-esteem, and point out the important role of experiences later in life. They argue that from birth onward, humans are active, curious and playful creatures, displaying a readiness to learn and explore, and do not require external reasons to do so. Although they are intrinsically motivated from the start, individuals become increasingly curtailed by social demands and roles. Through socialization, the child internalizes other people's thoughts, values and reactions as their own. For example, social norms and gender roles are internalized as a part of one's own personality and identity. This process takes place in different contexts and, accordingly, creates different degrees of intrinsic and extrinsic motivation in the growing child. Controlling contexts are considered to pressure the child to think, feel or behave in particular ways, which undermine intrinsic motivation and instead catalyze external motivation, such as performing to maintain self-esteem. In contrast, autonomy-supportive contexts involve taking the child's perspective, minimizing pressure and acknowledging her feelings, and thus foster intrinsic motivation.

Further, twin studies have shown genetic influences not just on the level of global and domain-specific self-esteem but also on their stabilities (Neiss et al., 2002), aspects that are related to competence-based self-esteem. Research in this area claims that the assumed influences from early family structure and parental behavior greatly mirror genetic effects.

Other contingencies of self-worth

Not all individuals seek reassurance of their self-value through com-

petence and perfection. For some, self-esteem may depend on feeling attractive and loved; for others, it may depend on being virtuous, powerful or self-reliant. Harter (1993) has found that children successively develop from a global self-view to a domain-specific value of themselves. For older children, the most important domains are competence, athletic ability, social acceptance and ability, and looks. Harter (1993) has also shown that the level of domain-specific self-esteem depends on the value one places on that domain. The theory by Crocker and colleagues (2001, 2004) states that self-esteem can be contingent upon various domains, such as achievements, relationships, social approval, looks, virtue or God's love.

From a vulnerability viewpoint, it is reasonable to divide the contingency into two main areas: competence and relationships (Blatt & Zuroff, 1992; Johnson, 2010). These areas refer to people's basic social needs (Sheldon et al., 2001) and are therefore considered the two main areas in which people may pursue self-value. These two contingencies give rise to fundamentally different behaviors to protect the self and the distinction is valuable in understanding and explaining differential vulnerability (Johnson, 2010). On these grounds, in the present thesis the concept of competence-based self-esteem was conceptually separated from that of relation-based self-esteem, which refers to a predisposition by which a low level of basic self-esteem is compensated for by relational reassurance. Individuals with high relation-based self-esteem strive to increase their self-esteem by investing in relationships and love. As a result, these individuals strive to avoid conflict and rejection as these threaten their self-esteem and, as a consequence, they demonstrate a behavior of excessive conformity and suppression of their own needs and negative emotions (Johnson, 2003). Due to their lack of basic self-love they are likely to underestimate how much they are actually valued by their partners and friends (Murray et al., 2003). The relation-based self-esteem construct and scale developed in Study I in the present thesis is separated on theoretical grounds (Blatt & Zuroff, 1992) from behaviors arising from competence-based self-esteem. However, relation-based self-esteem and other domains of contingent self-esteem are outside the scope of the present thesis, which focuses on competence-related aspects of stress and well-being.

Competence-based self-esteem as motivator

Self-esteem pursuits and competence strivings are not always vulnerable. They can also be a positive force, encouraging people to put great effort into their tasks. As stated by Dweck (2000), it is important to investigate what makes self-esteem strivings vulnerable or not.

Contingent self-esteem and self-esteem pursuits have been linked to a number of motivation-related concepts, such as performance goals (Dweck & Legget, 1988; Elliot & Dweck, 1988), different natures of motivation (Deci & Ryan, 1995; Ryan & Deci, 2000) and self-validation pursuits (Blatt et al., 1992; Dance & Kuiper, 1987; Dykman, 1998). According to Goal Setting Theory (Locke & Latham, 2004), goals determine the direction of almost any behavior and define the amount of effort exerted, the degree of persistence, and the likelihood that the individual will develop strategies to facilitate goal attainment. Locke and Latham (2004) assert that all consciously motivated behavior is goal-oriented, self-generated or assigned by others. The goals are, in turn, derived from human needs, personal values, personality traits and self-efficacy perceptions, shaped through experience and socialization. Crocker and Park (2004) see self-esteem as a goal, and note that the reaction to failure depends largely on differences in the nature of self-esteem pursuits. There are basically two different responses to failure, one of which is to feel worthless, give up and withdraw to protect one's self-esteem by disengaging. Another response is to increase one's effort and persist in attempts to boost one's self-esteem through success in the important domain (Scheier & Carver, 1985).

According to Higgins' Regulatory Focus Theory (Higgins, 1998), to be guided by *ideals* is to try to be what one wants to be, whereas to be guided by *ought* is to try to be what others think one should be. With a focus on promotion, people seek pleasure with their ideal self, and with a focus on prevention people seek to avoid pain with their 'ought self'. The latter stance is comparable to competence-based self-esteem, as these individuals are found to regulate their behavior and goals according to what others think, as well as to avoid failure in this striving. For instance, Johnson and Forsman (1995) showed that when receiving failure feedback people with low basic self-esteem and a high need to earn self-esteem by competence constituting the components of competence-based self-esteem displayed an unrealistically high ambition and poor performance whereas those with high basic

and high earning self-esteem used an adaptive strategy, resulting in good performance. On these grounds, it seems like that it is the level of basic trait self-esteem that is crucial for competence strivings and ambition to be vulnerable in terms of health. The compelling force to validate the self leads to over-achieving and losing perspective on one's limits.

Consequences of competence-based self-esteem on adjustment and health

Although contingent self-esteem can be motivating, there may be high costs involved with regulating one's behavior according to what will increase or decrease one's self-esteem (Crocker & Park, 2004).

When one's self-esteem is staked on competence this creates an exaggerated need to prove one's self-worth through successful acts and perfection. Therefore, by triggering aggressive competitive needs and inclining toward achievement-related stress, this predisposition is likely to entail profound health consequences. Blatt and Zuroff (1993) have proposed that the association between personality and physical illness is mediated by specific personal and social styles related to different kinds of stressors. In this matter, individuals who are preoccupied by achievements are primarily responsive to achievement-related situations as these situations threaten their self-worth. In threat-versus-challenge research, it is agreed that psychological stress involves the anticipation of or confrontation with situations that are perceived as potential threats to one's self-esteem (Tomaka & Blascowitz, 1994). In this respect, people whose self-esteem is not only low but also contingent upon achievement are considered to perceive performance situations involving personal evaluation as particularly threatening (Lyness, 1993).

The links between competence-related strivings and health outcomes could be assumed to go through anxiety and stress (Suinn, 2001), as people who strive to compensate lacking self-esteem with their doings tend to be highly anxious (Dykman, 1998). Anxiety, in turn, has negative effects on health (Suinn, 2001) and is a key component of how stress leads to ill-health, as it prolongs the stress exposure and keeps the stress level higher even if the person is not objectively exposed to the stressors (Sapolsky, 1994). A person with excessive self-esteem strivings is considered to be anxiety-driven and not joy-driven

(Crocker & Park, 2004), and is therefore particularly vulnerable to life stress. Indeed, CBSE has been found to be associated with self-esteem instability, toxic achievement strivings, performance anxiety, poor health status and somatic complaints (Johnson, 1998, 2002; Johnson, Paananen, Rahinanti, & Hannonen, 1997; Koivula, Hassmén, & Fallby, 2002). Moreover, a close link has been found between PBSE and the burnout process (Hallsten et al., 2002; 2005; Dahlin, Joneborg, & Runeson, 2007).

Some explanations for these health patterns are suggested by Ryan and Deci (2000), who argue that being regulated by introjection (i.e. regulation by contingent self-esteem) is accompanied by the experience of pressure and tension; one acts because one feels one has to and not because one wants to (Deci, Eghrari, Patrick, & Leone, 1994). Behavior that is externally controlled is associated with high levels of effort and anxiety, as well as maladaptive coping with failure, decreased persistence and decreased intrinsic motivation. It is also associated with lower levels of goal attainment and the absence of the increase in well-being associated with attainment of intrinsic or internalized goals (Ryan & Connell, 1989; Ryan & Deci, 2000; Sheldon & Kasser, 1995). Further, basing one's self-worth on academic performance is hypothesized to lead to helplessness in the face of failure, anxiety, self-handicapping and, in some cases, poor performance (Ryan & Deci, 2000). Students who base their self-esteem on academic achievements also show greater fluctuations in affect and self-esteem in response to positive and negative academic events (Crocker et al., 2003). The stress and anxiety related to self-esteem pursuits can also undermine learning and performance as this kind of stress affects the ability to learn and recall information in complex tasks through the effects of cortisol on the brain (Vedhara, Hyde, Gilchrist, Tytherleigh, & Plummer, 2000).

Different kinds of vulnerability have been suggested to develop depending on whether one's self-esteem is predominantly based on living up to high standards of competence or on love and support in close relationships (Blatt & Zuroff, 1992; Johnson, 2010). For example, Blatt and Zuroff (1992) have linked these distinctive self-related personality patterns (competence and relationships) to the concepts of self-criticism and dependency, which predispose people to different types of depression. Also, the competitive and hostile disposition of Type-A behavior and the helpless and dependent personality of Type-

C behavior have inspired researchers to link these different motivational and behavioral vulnerabilities to cardiac disease and cancer, respectively (see e.g., Sanderman & Ranchor, 1997 for a review).

There may be gender differences in how the behavior pattern of competence-based self-esteem manifests itself in health outcomes. Gender is touched upon in Study III in the present thesis. Therefore, gender aspects of competence-based self-esteem will be considered briefly.

Competence-based self-esteem in women and men

A low level of trait self-esteem is an ingredient of the concept of competence-based self-esteem, as defined in the present thesis, and possible gender patterns in competence-based self-esteem are linked to differences among men and women in trait self-esteem. In previous research, women have generally been found to have lower trait self-esteem than men. The difference is found to be generally small, but significant, across studies (see Kling, Hyde, Showers, & Buswell, 1999 for a review). Explanations for this difference concern, for example, gender roles; that men are expected to develop self-confidence as this is considered a stereotypical masculine characteristic. Another explanation emanates from peer-group interactions, in which girls interact democratically and communicate through polite suggestion whereas boys are more likely to influence others through direct demands. These different strategies of exerting influence create imbalance in cross-sex interactions in childhood, in which boys are impervious to girls' influence attempts (Maccoby, 1988). In school, teachers interact with boys more frequently than with girls, and give boys more specific and helpful feedback. Often, failures are attributed to a lack of motivation in boys but to a lack of ability in girls (Kling et al., 1999). Most studies show that self-esteem arises from socialization experiences both within and outside the home, which are found to differ between boys and girls (Kling et al., 1999).

As concerns contingent self-esteem and the compensation nature of competence-based self-esteem, gender scholars have suggested that women and men differ in their contingencies of self-worth (Joseph, Markus & Tafarodi, 1992; Harter, 1985). Josephs et al. (1992) argue that self-esteem in men "is derived, in part, from fulfilling the goals ascribed to their gender, being independent, autonomous, separate, and better than others" (p. 392), whereas in women it is derived, at

least in part, from “being sensitive to, attuned to, connected to, and generally interdependent with others” (p. 392). The tendency to see oneself as superior to others is more strongly associated with self-esteem among men than among women (Josephs et al., 1992). In addition, women are more likely to report that their self-esteem is based on others’ approval whereas men are more likely to report that their self-esteem is based on social comparisons (Schwalbe & Staples, 1991). As concerns performance-based self-esteem defined by Hallsten (2002), women have been found to show significantly higher values than men (Hallsten et al., 2002). In line with these arguments, women and men are taught to derive self-value from different sources (Kendler et al., 1998). Whereas women’s self-value is based on personal relationships but also achievements, men’s self-value is based on positive individuation, dominance and school/occupational success. Harter (1993) has found that the level of domain-specific self-esteem depends on the value one places on that domain. Appearance is a fundamental self-related domain for many people, and has the highest correlation to self-esteem (.70-.80), particularly in girls. Further, girls’ self-esteem being attached to their looks worsens over the years while boys do not show this tendency. So, self-esteem as a trait has shown some gender differences, and self-esteem contingent on external standards shows differences between men and women across studies.

The role of self-esteem in the relationship between stressors and burnout

Even though work stressors are considered the main predictors of burnout (Maslach & Leiter, 2008), most researchers acknowledge that stress-related health problems, such as burnout, arise from individual factors interacting with the context (e.g. Schaufeli & Enzmann, 1998). When individuals enter a context they bring with them personality characteristics, experiences and a history of interaction in social groups. All these form the individuals and affect their reactions to situations.

In a given situation, some individual characteristics are vulnerable at the same time as a maladaptive work organization constitutes an external load. The situation might shape individuals' vulnerabilities or operate by making certain experiences more or less frequent. For instance, a workplace with a high emphasis on achievement and competition might strengthen individuals' willingness to compete. Moreover, individual qualities could be affected by the environment so that good or bad behavior patterns are strengthened (Björkman, Joneborg, & Klingberg, 2002). This interaction is demonstrated in a study by Xanthapoulou and colleagues (2007) in which job resources, such as control over the way and pace at which to perform, evoke a sense of significance in employees who feel efficient, important to the organization and optimistic about the future, and consequently stay engaged in their work. However, there is also self-selection into specific occupations whereby individuals with similar personality patterns subsequently interact. Personality characteristics thus determine the way people comprehend, formulate and react to their environment (Judge & Cable, 1997).

Predispositions can act as vulnerability or buffering factors together with life events (stressors), as the perception of a situation as threatening or challenging depends on an individual's goals, fears, expectancies, needs and emotions (Lazarus & Folkman, 1984). Buffering per-

sonality characteristics are sometimes called protective or salutogenic, as they promote resiliency against illness due to adequate perception of a situation. One generally protective factor is a high level of trait self-esteem. In contrast, certain personality factors are called toxic or pathogenic as they instead create an appraisal of threat when facing a situation, eliciting vulnerable reactions. Low self-esteem, unstable self-esteem and contingent self-esteem are well-documented vulnerability factors of various negative health outcomes (Crocker & Wolfe, 2001; Johnson, 2010; Kernis et al., 1993).

According to Schaufeli and Enzmann (1998), self-esteem is one of the strongest personality factors predicting burnout. Individuals with high self-esteem are found to be less likely to experience burnout in a demanding organization environment. A meta analysis by Pfennig and Husch (in Schaufeli & Enzmann, 1998) of 6000 burnout participants shows that low self-esteem explains between 9-14% of the variance in burnout measured with the MBI; mostly emotional exhaustion, but also a lower degree of cynism and reduced professional efficacy. The important remaining question is whether the relationship between self-esteem aspects and burnout is direct or indirect, and what the direction of the relationship is. Rosse and colleagues (1991) state that global self-esteem is both a predictor and a consequence of burnout, suggesting the importance of self-esteem in the burnout process. Other studies have shown that self-esteem acts as a moderator as well as mediator between stressors and burnout. The job demands-resources model (Demerouti et al., 2001) and self-determination theory (Deci & Ryan, 1995) offer indirect support for a mediating role. For instance, need satisfaction through competence, relatedness and autonomy has been found to fully mediate between job resources and exhaustion (Van den Broeck, Vansteenkiste, de Witte, Lens, 2008). Similarly, another recent study showed that intrinsic motivation was a mediator between environmental stressors and the inefficacy dimension of burnout (Rubino, Luksyte, Perry, & Volpone, 2009).

Regarding the role of contingent self-esteem, Deci and Ryan (1995) reason that a controlling environment catalyzes the individual's introjected motivation, whereby the individual performs for the sake of raising her own self-value instead of pure joy in the task. Similarly, Crocker and Park (2004) argue that the experience of being devalued in an environment of scarcity, competition or evaluative focus is a powerful trigger of self-esteem goals, particularly in women. Further,

situational influences on contingent self-esteem can be inferred from studies in which performance goals and performance orientations have been manipulated in experimental settings. They show that contingencies for self-esteem can be activated by instructions, tasks or feedback (McFarlin, 1985; Rawsthorne & Elliott, 1999).

Summary of empirical studies

Study I Development and validation of two measures of contingent self-esteem

Background and aim

To obtain a comprehensive view of vulnerability to stress and strain, it is necessary to develop reliable and valid measures that capture the core of contingent self-esteem and its two main motivational dimensions. The new scales of competence-based (CBSE) and relationship-based (RBSE) self-esteem developed here complement current research on contingent self-esteem by clearly differentiating between two conditional self-esteem dispositions, based on two fundamental social needs. The item contents were carefully constructed on theoretical grounds, to capture the behaviors and attitudes people adopt to validate the self. Evidently, the prerequisite for self-esteem being truly contingent is the presence of a low basic sense of self-esteem, which in CBSE individuals appears to be compensated for by successful acts and in RBSE individuals by emotional reassurance. These new scales provide valuable tools for understanding the background of different patterns of vulnerability related to stress, coping and health.

The aim of Study I was to develop and validate two new concepts and self-report measures that assess two different aspects of contingent self-esteem: one based on competence and one based on emotional relationships. The study consists of three sub-studies: i) In Sub-study 1, the scales are construed by selecting items from a larger pool. The theoretical division of RBSE and CBSE was tested using confirmatory factor analysis. The dimensionality and psychometric properties of the two final scales were investigated, and the constructs and scales were validated by their correlations with other theoretically relevant measures. ii) In Sub-study 2, the theoretically important two-factor division of contingency was confirmed in a separate sample and a construct validation of the new scales was performed. iii) Finally, Sub-study 3

presents an additional validation of the new scales by employing a semantic differential technique.

Method

Sub-study 1. The scales were constructed by selecting items from a larger pool, by testing a theoretically important division of the RBSE and CBSE scales and each scale's factor structure with exploratory factor analysis. This was then compared to alternative models with confirmatory factor analysis (CFA) using LISREL 8.7 (Jöreskog & Sörbom, 2003). Further, the psychometric properties were analyzed and the constructs and scales validated by their correlations with other theoretically relevant measures, such as dependency, toxic achievement strivings and global self-esteem. The sample consisted of 215 undergraduate students from different study areas who answered a questionnaire comprising all involved scales.

Sub-study 2. The theoretical division of CBSE and RBSE was verified in a separate sample with CFA, and the validity of the new scales was tested against basic and earning self-esteem. The sample consisted of 116 undergraduates studying social sciences.

Sub-study 3. An additional validation of the new scales was performed by employing a semantic differential technique (Osgood, 1952). The words 'work' and 'relationships' were presented to participants together with adjective pairs (e.g. tense-relaxed and important-unimportant) to describe them, and they were asked to place a check on the point in the semantic place corresponding to their subjective meaning of the word. The sample consisted of all participants of the two first studies, comprising 331 individuals.

Main findings and conclusions

The exploratory and confirmatory factor analyses in Sub-study 1 verified competence and relationships as distinct means of self-validation. Further, the analyses revealed two dimensions of CBSE: i) self-esteem conditional upon competence (e.g., "I feel worthwhile only when I have performed well") and ii) frustrated self-critical strivings (e.g., "No matter how well I have done a task, there is always a nagging feeling that I should have done better"), and three dimensions of RBSE: i) self-esteem conditional upon love (e.g., "My self-esteem

fluctuates easily with signs of acceptance and rejection from others”), ii), fear of rejection (e.g., “It is important for my self-esteem to feel loved”, and iii) compliance (e.g., “I am inclined to be submissive and defer to others in an attempt not to lose their acceptance and regard”) (RBSE is not an essential part of the present thesis). The new scales showed factor structures corresponding to the theory, and also showed high reliability and gained both concurrent and convergent validity through different methods and in partly different samples. The CBSE scale correlated positively with perfectionism and “toxic” achieving, and the RBSE scale with affiliation and dependency needs. Discriminant validity was shown and the relation to global self-esteem of both scales was moderate and negative when neuroticism was controlled for. The internal reliability of CBSE was .89 and of RBSE .88, and test-retest stability was .93 in CBSE and .80 in RBSE.

In Sub-study 2, the two-dimensional factor structure (competence and relationships) was verified using CFA in a new sample. Further validity was provided by the CBSE and RBSE constructs’ relation to the basic and earning self-esteem model. CBSE was an interactive function of low basic and high earning self-esteem, whereas RBSE was a function of low basic and low earning self-esteem. This shows that CBSE and RBSE do not merely mirror trait self-esteem.

In Sub-study 3, semantic differential tests of meanings attached to the words ‘work’ and ‘relationships’ were performed. These indicate that high CBSE individuals associated significantly more negative adjectives (such as ‘tense’ and ‘anxious’) with the word ‘work’ than did low CBSE individuals, whereas high RBSE individuals associated more negative adjectives with ‘relationships’ than those with low RBSE. A principal components factor analysis was performed on the scores of the semantic scales, which showed that CBSE correlated higher with the factor ‘work’ than with ‘relationships’, and vice versa.

Study I shows the importance of developing distinctive scales to measure contingent self-esteem, to guide research on mechanisms of vulnerability and stress-related health.

Study II Physiological and behavioral reactivity when one's self-worth is staked on competence

Background and aim

Of particular interest for stress and health is contingent self-esteem staked on competence and achievement. Striving for competence when one's self-esteem is at stake elicits specific patterns of cognitive-emotional reactivity in self-relevant situations, with short- and long-term effects on one's social adjustment and well-being. Though this kind of reactivity is closely linked to physiological mechanisms, to date, evidence of the vulnerability status of self-esteem based on competence primarily derives from subjective behavioral and health reports.

The aim of Study II was to experimentally investigate the reactivity of CBSE by comparing high and low scorers on the CBSE scale regarding different objective indicators of physiological and behavioral reactivity in a performance situation with failure feedback. On the basis of current theoretical accounts, high scorers would exhibit more reactivity than low scorers.

Method

The participants were 61 undergraduate students with extreme scores on the CBSE scale. They were extracted from a pool of 220 students who had responded to a questionnaire including the CBSE scale (this was a new sample of students, not the same as in Study I). The participants performed a computer-based test in which they were asked to repeatedly replicate a configuration of lit-up squares shown on the computer screen. During the test they received failure feedback irrespective of their results. Physiological reactivity was measured with three indices of blood pressure measured four times during the experiment, as well as continuous assessment of a novel non-intrusive measure of response force (Englund & Patching, 2009). The response force indicated momentary exertion, measured by way of a force sensor installed in the computer mouse that registered the pressure the participants used to click on its button. As a complementary index of reactivity, each individual's perceived arousal during the session was assessed.

Main findings and conclusions

The results showed that high as compared to low scorers on the CBSE scale exhibited significantly stronger physiological reactivity and strain/effort, indicated by higher general blood pressure and more forceful responses, particularly in the first phase of the performance session. In addition, high CBSE scorers reported more perceived frustration, tension and anxiety during the test than low scorers did. Overall, the results indicate that individuals with high CBSE, when encouraged to perform well but failing, are more reactive and strive harder with more tense and frustrated feelings than do those with low CBSE. Individuals who stake their self-worth on the outcomes of their performances have a high need for control as they are eager to avoid failure, as this involves a decrease in their self-esteem. These results are therefore interpreted as high CBSE individuals being triggered by the lack of control at the beginning of the experimental session, when outcomes are unknown and uncertain. Using direct measures of reactivity, this study provides an objective indication of the vulnerability status of CBSE. As this self-structure appears to be associated with increased effort, anxiety and strain when performing with uncertain outcomes, its role in stress and well-being and particularly work-related exhaustive syndrome is important to address in forthcoming studies.

Study III Contingent self-esteem, stressors, and burnout in working women and men

Background and aim

In burnout research, high initial work involvement is frequently considered a part of the burnout process. Yet, few studies investigate the role of this involvement in burnout in relation to psychosocial stressors. Study III set out to investigate the role of performance-based self-esteem (PBSE)², as defined by Hallsten et al. (2002), in burnout, including work and private-life stressors in working women and men. PBSE is a form of contingent self-esteem referring to individuals' strivings to validate their self-worth through achievement. This is a

² The four-item scale of PBSE was used in study III as the present longitudinal data was collected before developing the theoretically and methodologically complementing CBSE scale (developed and validated in Study I and II in this thesis).

disposition linked to poor health and is used here to conceptualize the initial involvement in the burnout process. It was hypothesized that PBSE and work and private-life stressors predict burnout over time and that PBSE mediates between work and private-life stressors and burnout. Based on earlier findings, women were expected to score higher on PBSE and burnout, and to have stronger associations between PBSE and burnout, as well as between stressors and burnout, as compared to men. Further, PBSE was hypothesized to mediate between stressors and burnout to a greater extent in women than men.

Method

Data were derived from a representative population sample based on a questionnaire supplementing Sweden's series of regular labor-market surveys, and were gathered on two separate occasions. The first questionnaire was administered in late autumn of 2000 (Time 1), with 4878 persons taking part in the study. In a follow-up during the autumn of 2001 (Time 2), the questionnaire was sent to the same people who had responded to the first, with 4318 people responding at follow-up (Time 2). The current study is restricted to those respondents who were in full-time paid employment at both measurement occasions. The final study group comprised 2121 persons (991 men and 1130 women).

PBSE was assessed using a four-item scale developed by Hallsten et al (2002), which has been validated and found to have good psychometric properties (Hallsten et al., 2005). Work and private-life stressors were assessed with validated single items from Statistic's Sweden's studies, and covered work conditions (e.g. resources for good performance at work, conflicting demands and supervisor support) and private-life variables (e.g., energy-consuming domestic tasks and peer social support). Burnout was measured using the Pines Burnout Measure (Pines et al., 1981).

The direct effects of PBSE and stressors on burnout as well as the mediation analyses were tested using hierarchical regression analyses. Control variables, stressors and PBSE were taken from T1 and burnout measure from T2. All analyses were performed separately for women and men. The hypothesized pattern of gender differences was analyzed through the gender separate regression analyses and, in the total sample, using MANCOVA with all variables included and the

control variables as covariates.

Main findings and conclusions

The hierarchical regression analyses showed that PBSE was the strongest predictor of burnout, followed by private-life stressors. There was a full mediation of PBSE between workload and burnout for women, as well as between overtime work and burnout for men. Further, PBSE mediated partially between all the other stressors and burnout. These results were in line with the assumption that a high initial motivation, in terms of PBSE, can be involved in the burnout process. The gender separate analyses showed that women experienced more work and private-life stress whereas men showed stronger associations between work stressors and burnout. Further, women scored higher on both PBSE and burnout and showed a stronger association between these variables. There were no clear gender separate patterns in the mediation results. As there was a lack of change in burnout over the time interval of one year, there was no longitudinal effect in the results.

These findings indicate that individual characteristics along with both private-life and work stressors are important predictors of burnout and that factors predicting burnout seem to differ somewhat between women and men. These results are also in line with the assumption that a high work involvement, here conceptualized as PBSE, can be an implication of burnout. The study adds to our knowledge of the relationships between individual characteristics, work and private-life stressors, and burnout, showing that PBSE may act both as a stressor in itself and as a factor that increases the negative effect of contextual stressors on burnout. This is particularly important in today's working life, in which work and private life are increasingly intertwined, and individual characteristics become increasingly important to study further as they can play a role in explaining the consequences of today's work life on people's health.

Discussion

The overall aim of the present thesis was to develop a theoretically sound concept and measure of self-esteem dependent on competence, and to investigate the role of this kind of predisposition in burnout in relation to work and private-life stressors in women and men. The discussion is built around three main themes that correspond to the empirical studies in the thesis: i) Competence-based self-esteem as a concept and measure, ii) physiological and behavioral reactivity of competence-based self-esteem, and iii) contingent self-esteem, stressors and burnout. These main themes are complemented with the perspective of gender and a discussion of how competence-based self-esteem can be redirected to prevent burnout.

Competence-based self-esteem as a concept and measure

Contingent self-esteem based on different sources and areas of life has been an increasing focus in research (Crocker & Park, 2004; Kernis, 2002; Deci & Ryan, 1995). However, in these approaches the mechanisms of vulnerability in contingency as well as a clear distinction between areas of contingency remain unclear. The present thesis complements the picture and addresses the issue by identifying a theoretical basis of vulnerability and clearly distinguishing between two different contingencies: competence and relationships. The relationship aspect, however, is not elaborated on further as the present thesis concerns vulnerable aspects of competence-based self-esteem.

The concern of Study I was to develop and validate two measures of contingent self-esteem, whereby the core of contingency lies in the presence of a low level of basic (non-contingent) self-esteem (Deci & Ryan, 1995; Johnson & Forsman, 1995).

The development of the concept and measure of CBSE originates in the need to capture, in one conceptualization, low trait self-esteem and competence strivings for gaining self-esteem (Johnson & Forsman, 1995). Indeed, CBSE seems to efficiently embrace the core of psychological vulnerability only partly mirrored in states such as a low level of trait self-esteem, unstable self-esteem, and ‘toxic’ achievement strivings, as suggested by Studies I and II (see also Johnson 1998, 2010; Johnson & Forsman, 1995).

On this basis, competence-based self-esteem complements current research by providing further understanding of the attitudes and behaviors that characterize people who conditionally stake their self-worth on performances as compensation for their low basic self-esteem. The item content and factor structure of the CBSE scale in Study I further alludes to the vulnerable behavioral patterns inherent in self-esteem that is staked upon one’s competence. The factor structure mirrors frustrated self-critical strivings, perfection seeking and an unforgiving attitude toward one’s own failures. The first dimension refers to a self-attitude that predisposes an individual to a maladaptive pattern of competence striving, that is, a feeling that one’s self-esteem is defined by the outcomes of one’s daily performance, which creates a compelling pressure to accomplish. One implication is a tendency to compare one’s own accomplishments to those of others. The second dimension implies an over-critical and non-forgiving attitude toward one’s own weaknesses, resulting in exhaustive strivings and frustration.

Accordingly, the dimensions referring to attitudes and behaviors in individuals with an accentuated CBSE structure are considered to explain their excessive struggling when achieving their goals and at the same time being dissatisfied with their achievements due to their harsh self-criticism (Johnson & Forsman, 1995; Johnson, 2010). This pattern of behaviors and attitudes is likely to make the individual more likely to experience stress-related health problems. That competence-based self-esteem conceptualizes a compulsive and frustrated involvement in achievements and work (rather than a genuine and positive involvement) was further supported by the semantic differential test in Study I. The pattern, by which individuals who scored high on the CBSE scale associated more negative adjectives such as ‘anxious’ and ‘tense’ with the word ‘work’ than did low CBSE individuals, who associated more positive attributes, may indicate a vicious circle. People with CBSE structure have negative attitudes toward them-

selves, which leads to a dissatisfaction with their own results and, hence, a negative attitude toward work. This attitude toward work and achievements was also indicated in the results of Study II, in which high CBSE individuals put great effort into their performance with a concomitant experienced frustration, strain and anxiety during the experiment session. On these grounds, there is reason to assume that competence-based self-esteem is associated with stress-related problems due to these individuals' maladaptive motivation, originating in compensating for low basic self-esteem, rather than from a genuine and positive engagement in work. It is therefore unlikely that it is destructive to one's health to be involved in work as such, but rather to be involved as a means to strive for confirmation of one's self-esteem, as this creates maladaptive strivings.

One should bear in mind that samples in Studies I and II consisted of students. It might therefore be premature to draw conclusions regarding the working population. However, the behaviors and attitudes of the cognitive-motivational structure of CBSE can be thought to be triggered in all activities involving competition and evaluation, such as studies, sports and labor work.

It is important to note that the new CBSE construct does not measure a level of self-esteem acquired by achievement, but rather behaviors and attitudes indicating conditional self-validation pursuit. Even though trait self-esteem level (low) is part of the concept and its related behaviors, CBSE has shown unique variance beyond trait self-esteem and negative effect. In Study I it was found to be an interactive function of basic trait self-esteem and earning self-esteem by competence, when negative affect (neuroticism) was controlled for. Moreover, when neuroticism was controlled for, global self-esteem was only moderately correlated with both measures of contingent self-esteem. In this respect, CBSE goes beyond global self-esteem by referring to the specific behaviors and attitudes people may adopt to compensate for impoverished trait self-esteem. On this basis, CBSE is considered more informative regarding specific vulnerable self-related behaviors, and can thereby be regarded as more explanative of the link between self-worth and stress-related disease (Rosenberg et al., 1995). In addition, the construct's focus on maladaptive attitudes and behaviors evolving from this self-structure makes it a useful tool for practitioners working with the rehabilitation and prevention of stress-related problems.

Competence-based self-esteem and Performance-based self-esteem

It is important to discuss the distinction between the concept and measure of Competence-based self-esteem (CBSE) developed within the present thesis, and the concept and measure of Performance-based self-esteem (PBSE), developed by Hallsten et al. (2002) and used in Study III. Both constructs refer to a specific vulnerability of people who build their self-worth on their achievements, and as mentioned in Study I, some of the items in the first factor in the CBSE scale are similar to items in the PBSE scale (item number 4 and 5 in the CBSE scale, see Appendix 1 for full item content in the two scales). However, the two constructs are considered to differ concerning their theoretical and methodological framework and applicability. PBSE is inductively derived from burnt out individuals' descriptions of their thoughts and behaviors relating to work and achievements. It was primarily developed to capture the cognitive and motivational implications involved in the process of burning out (Hallsten, et al., 2002). CBSE complements PBSE by being psychometrically defined and theoretically derived from considerations based on current self-esteem research (Crocker & Park, 2004; Kernis, 2006; Johnson & Forsman, 1995). Moreover, the CBSE concept and scale captures a broader sphere of vulnerable behaviors arising from this specific cognitive-motivational structure where low basic self-esteem is compensated by achievements. While PBSE essentially measures conditional self-regard, CBSE also captures congruent maladaptive patterns including excessive self-criticism and frustrated feelings of insufficiency in one's accomplishments and, thus, comprises a broader scope of tension and strain related problems.

Physiological and behavioral reactivity of competence-based self-esteem

On theoretical grounds and based on the results of Study I, CBSE was assumed to have stress-related implications (see also Johnson & Forsman, 1995). Therefore, it was considered important to study these implications directly and objectively by examining physiological and behavioral reactivity of individuals with high and low CBSE in a performance situation with continuous evaluative feedback. It was found

that high CBSE individuals showed higher reactivity in terms of blood pressure and response force (the force they exerted when pressing on the computer mouse). In addition, they experienced the situation as frustrating and hard.

As self-esteem of CBSE individuals is staked on competence, the reactivity patterns were interpreted to be a consequence of the failure feedback as well as the uncertainty of outcome. Moreover, high CBSE individuals kept trying to achieve good results despite a seemingly impossible situation with continuous failure feedback, whereas low CBSE individuals mobilized less effort. This is in line with Robins and Beer's (2001) suggestion that when people face ego threat they are likely to persist in compulsive efforts to succeed (see also Di Paula & Campbell, 2002; Johnson & Forsman, 1995). This is an important component in understanding the excessive struggle of individuals in the burnout process.

That high CBSE individuals' reactivity was particularly strong at the beginning of the test when the outcomes were still uncertain mirrors that they are particularly aroused by uncertainty and lack of control. It is indeed commonly acknowledged that uncertainty can release arousal (Lazarus & Folkman, 1984). For instance, Frankenhaeuser (1996) has shown that individuals become particularly stressed by worries before a work task. Applied to the experiment in the present thesis, this can explain why high CBSE individuals who are concerned about their performance outcomes showed higher physiological and behavioral reactivity with perceived feelings of strain, anxiety and struggle than did those with low CBSE in the uncertain situation characterizing the beginning of the experiment session.

Drawing on this, anxiety and anger can be thought to constitute the links between CBSE and health outcomes, as people who strive to earn self-esteem through achievement tend to be highly anxious and frustrated (Dykman, 1998). Anxiety and anger have, in turn, been found to have negative effects on health (Suinn, 2001). Further, anxiety is one of the key components of the mechanisms explaining how physiological activation leads to ill-health, as it prolongs the stress exposure and keeps the stress level higher even if the person is not actually exposed to the stressors (Sapolsky, 1994). Indeed, Crocker and Park (2004) argue that a person with excessive self-validation strivings is anxiety-driven instead of pleasure-driven when performing

tasks, and is therefore particularly vulnerable to stress. In combination with anger and frustration the chronic self-esteem strivings become destructive, entailing physiological arousal and exhaustive state.

The results of high CBSE being particularly triggered by the situation characterized by uncertainty and lack of control can also be put into the framework of the job demand-control model (Karasek & Theorell, 1990). This proposes that when individuals experience a situation with a low level of control in combination with high demand, they react with stress. As it is highly important for CBSE individuals to succeed to protect their self-esteem, it could be assumed that these individuals have a high need to be in control of the circumstances. Therefore, drawing tentative parallels to the work context, it can be assumed that individuals high in CBSE are particularly affected by high-strain jobs, that is, a low level of control and high demands on their work achievements (in this case, the demands also come from themselves). This indicates the value of including individual characteristics when applying the job demand-control model. This provides an opportunity to study the role of individual differences in health outcomes, including individuals' experiences of different combinations of high and low levels of control and high and low demand.

In line with the results of Study II, Johnson and Forsman (1995) showed that low basic self-esteem combined with a high need to earn self-esteem through competence (the theoretical base of CBSE) resulted in unrealistic high ambition, poor performance and elevated physiological arousal. This self-esteem combination has also been found to be associated with self-esteem instability, toxic achievement strivings, performance anxiety, poor health status and somatic complaints (Johnson, 1998, 2002; Johnson et al., 1997; Koivula et al., 2002).

Although the experiment in Study II does not allow us to draw any direct conclusions concerning stress or health, the results of high CBSE individuals being physiologically and behaviorally reactive to the circumstances underlines the relationships between conditional competence-related self-esteem strivings, uncertainty, anger, anxiety and health. Furthermore, the reactivity indicated objectively by blood pressure, heart rate and response force (effort) correlated significantly with subjectively perceived anxiety, frustration, irritation and strain. This supports further the theory of CBSE being a behavioral predispo-

sition entailing chronically high involvement in performance and work driven by anxiety and frustration more than joy.

Contingent self-esteem, stressors, and burnout

Despite the common view that high initial work involvement plays a part in the burnout process (see e.g. Hallsten, 2005; Maslach & Jackson, 1984; Pines, 1993; Siegrist, 1996; Shirom et al., 2005), few studies investigate this involvement empirically. Study III aimed at longitudinally investigating the role of performance-based self-esteem (Hallsten et al., 2002) in the burnout process in relation to work and private-life stressors in working women and men. Performance-based self-esteem refers to a contingent self-esteem staked on competence (Hallsten et al., 2002), and was used in this study to conceptualize the initial involvement considered to be an implication in the burnout process. The results suggest that PBSE may act both as an important stressor in burnout in itself and as a mediator by worsening the effect of stressors on burnout. These results are compatible with the assumption that high initial motivation, here assessed with PBSE, can be an implication in the burnout process (see e.g. Hallsten, 2005; Maslach & Jackson, 1981; Pines, 1993). This is in line with previous studies that suggest that PBSE has importance for ill-health. A recent study found a main effect of PBSE on stress (Albertsen et al., 2010), and Hallsten and colleagues' (2002; 2005) studies show that PBSE is associated with burnout measured with the Maslach Burnout Inventory and the Pines Burnout Measure. This association was also found in a cross-sectional study of medical students, in which PBSE had significant correlations with both burnout dimensions in the Oldenburg Burnout Inventory (Dahlin et al., 2007).

In this respect, the mediated PBSE path to exhaustion found in Study III is in line with the self-worth perspective on burnout (Hallsten, 2005), and provides further support for PBSE as an important factor in the burnout process (Hallsten, 2005; Dahlin et al., 2007). However, it is important to note that an individual can very well have accentuated performance-based self-esteem (or competence-based self-esteem) and still not burn out. One can also risk burnout even without this predisposition, simply as a result of a stressful environment.

It is important to mention that even if individual characteristics play an important role in burnout, the individual is not solely responsible for becoming burned out as it is likely that a joint process occurs between the individual and the environment, leading the burnout process forward. That PBSE seems to be triggered by the work environment in Study III underscores that individual characteristics act in accordance with the context. As Crocker and Park (2004) have found, a situation marked by competition is likely to trigger self-worth pursuits, and Deci and Ryan (1995) acknowledge that a controlling environment undermines intrinsic motivation and fosters motivation evolved by self-worth strivings. In Study III this was found in stressors such as lack of supervisor support and few opportunities to decide over the work pace triggering contingent self-esteem. Moreover, in light of previous research suggesting that factors that increase uncertainty and unpredictability are particularly associated with worry (Dugas, Freeston, & Ladouceur, 1997), work stressors like conflicting demands and lack of supervisor seem to have links to PBSE.

Indeed, not knowing when the job is good enough and thus when to stop working has been found to be associated with ill-health (Hellgren et al., 2008). In Study I it was found that part of the concept of competence-based self-esteem is that individuals high in this predisposition have a particularly high need to feel sufficient and competent in their doings. It therefore seems reasonable to assume that the overly self-critical stance arising when self-worth is staked on performance makes it difficult to judge when the work is good enough, and appears to be a particularly vulnerable disposition for stress-related complaints. Consequently, individuals who conditionally strive for self-esteem are continuously seeking other people's appreciation and feedback on their work. This was further indicated by the results of Study III, in which lack of social support was particularly detrimental to individuals with high performance-based self-esteem.

Understanding how the individual and the work context interact is particularly useful in working life today, where work, private life and individual characteristics are increasingly intertwined (Näswall et al., 2007). The flexibility and increased responsibility placed on the employee may be beneficial for some, while others risk pushing themselves too hard under these circumstances. Self-esteem staked on one's performance promises to be a factor that can shed light on why some people have difficulty limiting their workload and risk stress-

related health problems in a work context with fewer boundaries and less structure.

Similar reasoning about the interplay of individual characteristics and health is offered by Von Thiele Schwarz (2010). She found that overcommitment has a greater impact on processes that are important for health than do conditions during work. Overcommitment refers to the inability to stop thinking about work and duties after leaving work (Siegrist, 1996), and was found to be both a stressor in itself and to worsen the effect of job stressors by preventing recovery after these stressors. Von Thiele Schwarz concludes that factors in the environment may increase worry and lead to ill-health through prolonged stress reactions derived from individual characteristics. This reasoning of the role of overcommitment conforms to the results of Study III, in which PBSE appears to be both a stressor in itself and a mediator between environmental stressors and burnout.

A challenge in burnout research is that illness and symptom development is often a long process and it is therefore hard to know when the illness/syndrome has started and thus when one should measure the state of burnout. For instance, the state is hard to capture through self-reports before a person experiences any clear symptoms and, particularly, is aware of them. Moreover, people who are high-performing and excessively involved in their work are those most likely to ignore the symptoms and warning signals from the body. Therefore, they may become aware of the symptoms relatively late in the process of burning out (Hallsten, 2005). Thus, when interpreting the results of Study III it should be considered that it might be the case that individuals high in PBSE score lower on burnout than is actually the case, as they are in fact still ignoring their symptoms. It can also be difficult to distinguish between symptoms, consequences and antecedents (Shirom, 2005). Maslach and colleagues (2001) acknowledge that lowered (trait) self-esteem can be regarded as a consequence of the burnout process, as perceived inefficacy is one dimension of the burnout syndrome. They argue that the closer a person gets to major exhaustion and possibly sick leave the more poorly she performs at work, as her cognitive functions become affected through concentration and memory problems. However, most studies on self-esteem and burnout are conducted by focusing on the level of trait self-esteem, which deviates from contingent self-esteem concepts as defined and used in this thesis, measuring specific behaviors and attitudes arising from a condi-

tional striving for self-value. Therefore, as suggested by Hallsten (2005) and indicated in Study III, it is more likely that contingent self-esteem staked on performance is a predictor of burning out or may even constitute part of the process.

In Study III, burnout is defined as symptoms experienced by people still at work, in contrast to exhaustion syndrome, which refers to experienced states of people on sick leave. Schaufeli and Enzmann (1998, p. 190) argue that burnout research, in its “striving to become ‘serious’, has tried to skip the ‘clinical’ stage of development which may have been premature”. A reason for this is that Maslach and Leiter (2000) strongly warn against tendencies to “blame” the individual, as they advocate seeing burnout as a work-related phenomenon. Therefore, they also consider the prevention and cure of this syndrome a responsibility of the organization. However, the results of Study III indicating that individual characteristics in terms of PBSE play a role in burnout certainly do not endorse blaming burnout victims for their own lot. The results rather inform that some are at higher risk than others of encountering crises like burnout in certain contexts. In line with this reasoning, Schaufeli and Enzmann (1998) regard burnout as both an occupational problem and a clinical syndrome that must be tackled through efforts on the work level as well as the individual level. As they suggest, it is reasonable that the appropriateness of the perspective largely depends on the burnout severity. When symptoms are less severe it is most appropriate to consider burnout an occupational problem, but in severe clinical forms of burnout it is more appropriate to focus on the person and on individual treatment.

Contingent self-esteem and burnout in women and men

In Study I CBSE was found to be higher in women than in men, and in Study III women scored significantly higher on PBSE than men did. Further, also in Study III, women had a stronger association between this type of self-esteem and burnout than men did. This is in line with studies using Hallsten’s combined measure of burnout, including the Pines Burnout Measure and the PBSE measure, in which the main risk group is found to be women (Hallsten et al., 2002). With regard to burnout, results have been mixed concerning gender differences (Schaufeli & Enzmann, 1998). However, statistics from Sweden (Sta-

tistic's Sweden, 2011) show that women are overrepresented in sick leave due to exhaustion syndrome [utmattningssyndrom]. Moreover, in the past twenty years there has been a great increase in burnout in young, highly educated women (Verdonk et al., 2010). On these grounds, the risk group for contingent self-esteem staked upon competence appears to be close to the risk group for burnout or exhaustion syndrome.

The over-representation of women on sick leave due to exhaustion syndrome and in some cases burnout (Purvanova & Muros, 2010) can also be explained by factors other than contingent self-esteem. First, women are more inclined to seek medical treatment than men, and are, therefore, diagnosed more often. But this may only explain a part of the gender difference. As women and men are found in different professions, levels and sectors on the labor market (SOU, 2004), they experience different work conditions. Women have generally poorer balance between decision latitude and work demand, they have longer work hours than men due to a double work burden, and they experience more home-work conflict than men do (Lundberg & Frankenhaeuser, 1997). Further, women still experience fewer opportunities to have a career, and receive lower salaries, compared to men in equivalent work (Alexanderson & Östlin, 2000; Lundberg & Frankenhaeuser, 1997; Torkelson, Muhonen, & Peiró, 2007). All these factors can be assumed to contribute to the increased internal demands women put on themselves to be extremely hard-working. These factors together with self-esteem strivings may contribute to women's higher prevalence of stress-related problems, such as burnout and exhaustion syndrome.

Explanations for women's higher level of performance-based self-esteem/competence-based self-esteem can be sought in the level of trait self-esteem as well as the tendency to compensate for this through achievement strivings. Women's lower trait self-esteem (Kling et al., 1999), the key component of competence-based self-esteem, could be one explanation for women's higher level of competence-based self-esteem (and relation-based self-esteem, as found in Study I). Today, women appear to have a higher tendency to compensate for their self-doubt through excessive self-esteem strivings, as women report higher demands to be high-performing than men do (Löve, 2010). As a consequence, they go to great lengths to repair their self-esteem through a destructive behavior pattern of excessive

ambition, perfectionism, high need for control and harsh self-criticism, attitudes and behaviors found to be involved in competence-based self-esteem.

Moreover, Study III suggests that the patterns that can lead to burnout appear somewhat different for women and men, which implies that different rehabilitation and prevention practices might be utilized for women and men. The results of Study III showed that women scored higher on both PBSE and burnout, had a stronger association between these factors and generally reported more stress than men did. Men's perception of work stress was more strongly associated with burnout over time. Although the results are tentative, they suggest interesting gender patterns, which may have a bearing on the etiology of burnout. In line with the reasoning of Hallsten (2005), it can be thought that self-esteem striving is an essential component of the burnout process, particularly in women, which might have consequences on the prevention and rehabilitation of burnout.

Redirecting the destructive drive in competence-based self-esteem to prevent burnout

Competence-based self-esteem is considered a maladaptive compensatory self-validation pattern originating in early experiences of conditional regard (Deci & Ryan, 1995). It is likely that the low level of basic self-esteem, on which competence-based self-esteem is theoretically based, is founded early in life. However, Study III indicates that contingent self-esteem seems to be triggered by certain contextual stressors, suggesting that the compensating part is not stable but rather continues to be formed throughout life. On these grounds, the efforts to prevent burnout in individuals with self-esteem staked on competence should therefore be placed on both the individual and her current life context. Possibly, with adequate effort, the maladaptive drive in competence-based self-esteem can be redirected to positive and productive energy, which benefits both the individual and the organization.

Prevention in the workplace

Study III indicates that circumstances such as contradicting demands,

lack of resources and social support seem to trigger contingent self-esteem and thereby burnout. As individuals with high competence-based self-esteem are characterized by an inability to set limits for themselves, and thereby to realistically judge when the work is good enough, they are supposedly particularly stressed by a situation with few boundaries. Even if the flexibility of modern working life is certainly desirable, some people might need more clear and realistic goals, concrete work instructions and adequate feedback. Of particular importance is to provide a good and positive work climate and culture in which some failure is allowed and support from colleagues is encouraged. This kind of work climate is likely to foster a health-promoting environment, for both individuals with high competence dependent self-esteem and other employees. Further, to redirect the negative involvement of self-worth strivings into positive engagement and thereby prevent burnout, it is possibly also important for an individual to be in a position and workplace that is in accordance with the her values, personality and interests.

Further, it is essential to increase the awareness of the behavior and attitude pattern of competence-based self-esteem. This knowledge is important for supervisors, human resource personnel and colleagues, so that they can be observant of the risk groups. Considering the increasing number of young girls and boys with burnout symptoms, and knowing that the behavior and attitude pattern characterizing competence-based self-esteem may have its origins in early development, it is important that preschool and school staff learn more about this pattern. However, even if it is important for supervisors and school personnel to observe signals, it is also important for the individuals themselves to be aware of their vulnerability and learn how to regulate their behavior adaptively.

Prevention and treatment on an individual level

Competence-based self-esteem, as defined in this thesis, mirrors behaviors such as perfectionism, self-criticism and excessive ambition. Studies in this thesis also suggest that the chronic pursuits of self-esteem foster negative and anxious attitudes toward work. To redirecting this negative drive and changing the behavior pattern to be more adaptive, cognitive behavior therapy (CBT) appears to be suitable (Perski, 2006). This therapy can change maladaptive attitudes and behaviors concerning goals and performance and make achievement

less compulsive and more joyful. For instance, with certain therapy tasks the patient can be encouraged to change negative patterns of perfectionism, learn to say no, set reasonable goals and reduce strong control needs. As the excessive involvement that is inherent in CBSE creates high tension and strain, as shown in Study II, this therapy could also provide the patient with tools to learn how to relax so that they can recuperate sufficiently.

As the excessive achievement strivings in people with competence-based self-esteem arise from low basic self-acceptance, it is equally important to raise the patient's low level of basic self-esteem, which is possible through therapy, for instance existentially based dialectic behavior therapy (DBT; Kåver & Nilsson, 2003). This type of therapy works with the person's self-acceptance and encourages considering the self in terms of 'who I am' rather 'what I can do'. Therefore, for the early prevention of risk behavior, parents as well as preschool and school personnel should emphasize the child as a person rather than the child's acts. Then, as an adult, the individual can distinguish her value as a person from her instrumental value earned by doings and thereby treat failures and goals adaptively.

Methodological considerations and future research

Contingent self-esteem

In Study I the CBSE scale was developed and preliminarily validated in two samples. Confirmatory factor analysis (CFA) was used to discriminate between competence and relationship contingencies of self-esteem, and to verify the factor structure in each of the new scales. According to Kelloway (1998), the approximate minimum sample size should be 200 individuals in order to use structural equation modeling (SEM) with LISREL. On this basis, the sample size in Sub-study 2 ($N = 116$) in which CFA was used can be considered modest. However, as the Goodness of Fit index is considered sensitive to sample size the additional fit indices, which were considered satisfactory in the analysis, strengthened the results. It should be further noted that the scales developed in Study I comprise only positively worded items, which can elicit acquiescence response bias. In this respect, some modifications addressing this issue might be considered in the future development and use of the scales. On the positive side, the scales show high reliability and the three sub-studies provide good preliminary construct validity for the scales, using the semantic differential method and relating the scales to other scales and self-esteem models in different samples.

Concerning future research on contingent self-esteem, the associations between competence-based self-esteem and close concepts, such as performance-based self-esteem, job involvement, introjected regulation, overcommitment and Type-A behavior pattern, should be addressed to elucidate their role in self-related vulnerability. Furthermore, as global self-esteem is the most frequently applied self-esteem concept in relation to burnout, it would be useful to examine in more detail the relative impact of competence-based self-esteem and global self-esteem on burnout.

In Study II, the CBSE scale was validated experimentally by comparing high and low scorers on the CBSE scale in their physiological reactivity in a performance situation with failure feedback. An advantage in Study II was the use of objective criterion measures, of which the tentative use of response force, a novel covert measure of behavioral reactivity, is particularly innovative (Englund & Patching, 2009). It is known that self-related psychological defenses operate outside one's conscious control, suggesting a need for research that circumvents the use of conscious articulation (Arndt & Greenberg, 1999). People are sometimes unwilling to report how they feel or why they feel the way they do. Therefore, it is important to study self-esteem implications through methods other than simply self-reports to be able to capture the implicit indications of self-esteem beyond conscious control.

Concerning the possible stress relevance of competence-based self-esteem, some stress researchers argue that biological markers are better indicators of stress than, for instance, self-reported stress. However, it is important to use the most applicable biological markers. In Study II, systolic blood pressure, diastolic blood pressure and heart rate were assessed four times during the experiment. In addition, the participants' effort and momentary exertion was monitored through the use of response force, where a sensor was installed in the computer mouse to measure the pressure the participant used to push on the mouse button. It can be thought that ambulatory blood pressure assessment would have yielded a more representative and reliable picture of the changes in blood pressure (Gerin, 1988). However, as the device is invasive and causes inconvenience for the participants, it could have affected the measures. Further, as cardiovascular reactivity is affected by body posture, physical activity and time of day, as well as coffee and cigarette intake, an alternative method could be to combine blood pressure and heart rate measures with urine catecholamine. On these grounds, the present method (a combination of measures of response force, cardiovascular reactivity and subjective arousal) is considered an appropriate methodology for the present purpose as it provides an indication of arousal, momentary exertion and emotional tone in the participant. However, in forthcoming research competence-based self-esteem could be related to other physiological markers, such as cortisol, preferably in a natural setting and assessed at different time points during the day. This would allow for comparison be-

tween high and low CBSE individuals and cortisol levels as a stress marker during work time and leisure time in women and men.

In both Studies I and II, the participants were undergraduates. Even though university students in Sweden represent different ages and social classes, providing a fairly good average of the population in general, in future studies the new scales should be further validated in the general population and also be applied specifically to the working population. In particular, the interesting differences between men and women in contingent self-esteem found in Studies I and Study III could be further investigated in gender-balanced samples.

Burnout

In Study III, performance-based self-esteem, stressors and burnout were measured at two time points with one year between the assessments. The results showed that the mean values of PBSE and burnout were similar in T1 and T2; thus the study's longitudinal character is limited. The failure to show any change in burnout scores over time was interpreted as mirroring the short time interval of one year. Burnout is a slow process, which has been confirmed in several studies (e.g., Shirom et al., 2005). Studying a slow mental and physiological process such as burnout without adequate time lags may fail to detect significant developments. Therefore, it would be wise to include data sampling from more than two time points as a restriction to only two points in time places a heavy burden on the wise choice of an interval. However, long intervals are costly and increase sample attrition. Future research will likely benefit from investigating the role of contingent self-esteem, stressors and burnout with at least three data points over an extended period of time to provide a better chance of detecting change and to outline the direction. The data should, preferably, be analyzed using structural equation modeling (SEM) to get an adequate and more informative picture of the directions of the associations.

Self-report measures, which were used in Study III, can share certain error variance. Therefore, forthcoming studies might use objective criteria of burnout based on medical records. One methodological consideration in Study III that should be mentioned is that the questionnaire on stressors only included one item measure. As a conse-

quence, repeated hierarchical regression analyses were performed for each measure, which could have increased the risk for Type I error. However, the relatively low correlations between the different stressors indicate that they measure different aspects of work and private life, and thus that valuable information could have been lost if they had been merged together. A reliability problem, which could have arisen with single items might have been balanced by the large sample in the study.

Moreover, asking workforce veterans, who probably made it through their first crises long ago or learned to live with them, may not give adequate knowledge about burnout. Further, those who are severely burned out are possibly not at the workplace. Instead, studying people before and after some major turning point in their lives such as job entry, corporate reorganization or job loss could offer better chances of observing the commencement of burnout processes and possibly tracking down their causes. Ideally, a study distinguishing dispositional influences from environmental ones should assess the personality of the participants before they are exposed to external influences presumed to cause burnout, and follow them over some period of time.

Practitioners working with rehabilitation of individuals with burnout or exhaustion syndrome often agree that their clients are people who have lived their whole life being trying to gain the approval of others by being performance-oriented (Perski, 2006). This has led to excessive work effort, which has broken them down. It would be valuable to examine whether this bears scientific proof, that is, whether individuals diagnosed with exhaustion syndrome have higher competence-based self-esteem than other patient groups do. This could be done by assessing competence-based self-esteem in individuals on sick leave due to exhaustion syndrome and compare this patient group to a control group. It would also be valuable to evaluate cognitive behavior therapy as a successful treatment for individuals with excessive competence-dependent self-worth. This could be investigated by assessing patients' competence-based self-esteem before and after treatment, with a follow-up some years after treatment. This could provide insight into whether behaviors and attitudes characterizing individuals with high competence-based self-esteem are changed through cognitive behavior therapy.

Concluding remarks

Taken together, the three studies in the present thesis provide knowledge about a cognitive structure that is likely to be of increasing importance in today's working life. The thesis suggests that to build one's self-esteem on one's own achievements is a vulnerable structure linked to physiological and psychological reactivity. In a stressful environment, these self-esteem strivings can evolve into a destructive behavior pattern that in the long run can lead to burnout.

In practices to prevent burnout it is valuable to identify the characteristics of those most prone to burnout, and of the stressors that are most detrimental for health. The present work, by developing a new concept and scale capturing the behaviors and attitudes which incline people to stress and burnout, provides a valuable guide to future research in the area. Evidently, it is not necessarily vulnerable to be a high achiever as such, but to achieve in order to compensate for a deficient basic sense of self-worth. This creates a maladaptive behavior and attitude pattern, which appears particularly pronounced in women. Moreover, the thesis sheds light on life stressors that are associated with burnout and that may trigger the vulnerable cognitive-motivational structure of self-esteem dependent on competence.

On these grounds, an excessive involvement in work and a high focus on achievements evolving from the individual's strivings for self-worth seem to play an important role in individuals' health. The present thesis as well as future research within the field, can contribute to help individuals to restructure their thinking and behavior related to achievements and to create a healthier work and private life.

Svensk sammanfattning

Föreliggande avhandling fokuserar på villkorlig självkänsla, en individfaktor som består i att en person är beroende av att prestera för att kompensera för en bristande grundläggande självkänsla. Denna typ av strävanden har visat sig öka sårbarheten för stressrelaterad ohälsa som utbrändhet. Syftet med avhandlingen var: 1) Att utveckla ett teoretiskt välförankrat och distinkt begrepp samt mätinstrument för duktighetsberoende villkorlig självkänsla. 2) Att studera reaktivitet i en prestationssituation hos individer med denna disposition. 3) Att undersöka hur villkorlig självkänsla och stressorer i arbete och privatliv hänger samman med utbrändhet bland yrkesarbetande kvinnor och män.

Med utgångspunkt i väletablerade teorier om självkänsla utvecklades i Studie I ett begrepp och mätinstrument som benämns Kompetensbaserad självkänsla. Detta arbete hade också till avsikt att beskriva det karaktäristiska beteendemönster som denna kognitiva struktur utmynnar i. Genom konfirmatorisk faktoranalys konstaterades att kompetensbaserad självkänsla inkluderar två dimensioner: i) villkorlig självkänsla baserad på prestationer och ii) självkritik. Detta koncept visades vara distinkt från andra typer av villkorat självvärde. Tre delstudier visade att mätskalan har god validitet och reliabilitet.

Studie II var en datorbaserad experimentell undersökning som fokuserade på den fysiologiska och psykologiska sårbarheten hos personer med hög kompetensbaserad självkänsla i en prestationssituation där utfallen evaluerades. Anspänning i fysiologisk mening mättes med blodtryck och puls samt med en sensor som installerats i datormusen för att observera hur hårt en undersökningsdeltagare tryckte. Psykologisk anspänning mättes genom ett självskattningsformulär. Det framkom att individer med hög kompetensbaserad självkänsla hade signifikant högre fysiologisk och psykologisk anspänning, i synnerhet i början av experimentsessionen när osäkerheten om deras progress var störst.

Studie III fokuserade på att undersöka hur villkorlig självkänsla och stressorer i arbete och privatliv hänger samman med utbränning över tid i ett befolkningsurval av yrkesverksamma kvinnor och män. Resultaten visade att villkorlig självkänsla var den starkaste prediktorn av utbränning över tid för både kvinnor och män, följt av stressorer i privatlivet. Ur självskattningarna framkom att kvinnor upplevde sin arbetsmiljö som sämre än männen men att upplevelsen av en dålig arbetsmiljö hade en starkare koppling till utbränning hos män. Kvinnor hade istället högre nivåer av villkorlig självkänsla och av utbränning, samt ett starkare samband mellan villkorlig självkänsla och utbränning.

Med utgångspunkt i de empiriska studierna som ligger till grund för avhandlingen konstateras att villkorlig självkänsla, där duktighet och presterande får ersätta en bristfällig bastrygghet, utgör ett viktigt verktyg som hjälper oss att förstå sårbarhetsmekanismerna bakom stressrelaterad ohälsa. Särskilt tycks denna typ av villkorlig självkänsla vara av vikt i utbränningsprocessen, i synnerhet hos kvinnor.

Appendix 1 CBSE scale and PBSE scale

Competence-based self-esteem scale
(Johnson & Blom, 2007)

1. I feel worthwhile only when I have performed well
2. I think my worth as a person is determined by how well I succeed
3. It is not 'who I am' but 'what I can accomplish' that matters
4. *I sometimes try to prove my value by achievements*
5. *My self-esteem is highly dependent upon the results of my daily actions*
6. I experience other people's success as threatening
7. Other people's success makes me push myself even harder
8. I easily get restless if I have nothing at hand to accomplish
9. No matter how well I have done a task, there is always a nagging feeling that I should have done better
10. When I have failed in an exam or in another context performed worse than I expected it has made me doubt my self-worth
11. It is hard for me to forgive myself when I fail in an important task
12. My feeling is that no matter how hard I work I'll never reach my best performance goals.

Performance-based self-esteem scale
(Hallsten et al, 2002)

1. *I think that I sometimes try to prove my worth by being competent*
2. *My self-esteem is far too dependent on my daily achievements*
3. At times, I have to be better than others to be good enough myself
4. Occasionally I feel obsessed with accomplishing something of value

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