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Transformational Leadership and Burnout within the Swedish Construction Industry

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Abstract

This study investigated the relationship between perception of transformational leadership and burnout experience and determined the mediation effect of organizational factors on this specific relationship within a Swedish construction company. Further, differences between blue- and white-collar workers in the perception of transformational leadership and burnout experiences were examined. It was found that the perceived transformational leadership style can predict the burnout dimensions cynicism and professional efficacy, but not the exhaustion dimension. As hypothesized, white-collar workers perceive their leaders as more transformational than their blue-collar colleagues. No significant differences between the workers were identified in terms of burnout experience. Analyzed in separate mediation models, the organizational context factors reward and values were found to fully mediate the relationship between transformational leadership perception and cynicism. The relationship between transformational leadership and professional efficacy was fully mediated by the organizational context factors control, fairness, reward, and values. The study emphasizes the importance of transformational leadership and organizational context factors for burnout prevention in the construction industry and gives several implications for this field of studies.

Keywords: transformational leadership, burnout, areas of worklife, construction industry

Introduction

The working environment has changed rapidly over the past decades. In addition to the demands of time pressure, and the need to maintain a consistently high quality of work, globalization also requires employees to rapidly adapt to new environments (Kulkarni, 2006). Under these new circumstances, burnout has become a common problem in the 20th and 21st century (Weber & Jaekel-Reinhard, 2000, Zwingmann et al., 2014). According to recent research, 29% of the workforce in Europe suffers from burnout (Kukarni, 2006). The burnout syndrome affects two main areas: First, it leads to negative physical as well as psychological consequences for the employee (e.g., back pain and depression; Maslach, 2001). Second, it has a negative effect on organizational outcomes (e.g., decreased productivity; Swider & Zimmermann, 2010).

Several studies have shown that leadership can mitigate employees' burnout experience. In this light, the transformational leadership style has been shown to be especially successful (Gill, Flaschner, & Shachar, 2006). All identified studies that investigated the relationship between perceived transformational leadership style and followers' burnout experience, could confirm a negative relationship between the two, implying that transformational leadership mitigates burnout (Corrigan, Diwan, Campion, & Rashid, 2002; Diebig, Poethke, & Rowold, 2017; Hetland, Sandal, & Johnson, 2007; Hildenbrand, Sacramento, & Binnewies, 2018; Kara, Uysal, Sirgy, & Lee, 2013; Lee & Cummings, 2008; Montano, Reeske, Franke, & Hüffmeier, 2017).

Yet, none of them investigated this relationship within the construction industry or within a Swedish sample. Within the construction industry, existing studies mainly focused on physical sources of stress rather than on social sources (e.g. Meliá & Becerril, 2007). Since it was found that burnout leads to an increase of severe injuries (Swider & Zimmermann, 2010), this makes burnout a serious issue within the construction industry. However, the importance of burnout within the construction industry and its influence on blue- and white-collar workers is still unclear as it has not been studied sufficiently yet.

The interest in the investigation of the relationship between transformational leadership and burnout is not new. While in the 1970s it was believed that burnout only occurs in health care related jobs, such as nursery, it is known nowadays that no occupation is free of burnout (Kukarni, 2006). Yet, there is still more research necessary to explore the issue among other occupations and fields. In order to prevent employees' burnout within the construction industry and to gain a broader understanding within this specific industry, this

study aims at investigating the relationship between transformational leadership perception, burnout and mediating organizational factors within the construction industry.

Transformational Leadership

The right leadership style is crucial for organizational success (Spisak, O'Brien, Nicholson, & van Vugt, 2015). It is widely agreed upon that transformational leadership style is the most successful leadership style, because it encourages employees to perform beyond expectations (Bass & Riggio, 2006; Judge & Picollo, 2004). Especially in uncertain situations and changes within the organization, transformational leadership offers a sense of security to followers (Hinkin & Tracey, 1999). Characteristic for transformational leadership is that this type of leadership allows organizational change. Therefore, managers should lead transformationally in order to adapt to these changing environments and to guarantee organizational success.

According to Bass and Avolio (1995), transformational leadership is defined by four different dimensions, the so called four I's: *idealized influence, inspirational motivation, intellectual stimulation,* and *individual consideration.* The first dimension, idealized influence, can be divided into *idealized influence attributed* and *idealized influence behavior.* Idealized influence attributed describes the implicit influence of a supervisor on values, motives and aims of employees (Felfe, 2006). Organizational ideals are transformed to individual ideals, thus are transformed to intrinsic values leading to higher motivation (Bass, 1999; Wang, Oh, Courtright, & Colbert, 2011). The leader serves as a role model that follows moral and ethical standards, and receives respect and trust in return from the followers (Bass, 1999; Felfe, 2006). In addition, idealized influence behavior represents the leaders' ability to fulfill the high expectations themselves, they have towards their followers (Felfe, 2006). The second dimension, inspirational motivation, focuses on a clear communication of attractive and desirable visions for the future. Leaders give their employees confidence that these visions can be reached and fill them with enthusiasm about the future (Bass & Avolio, 1995). They have high expectations and encourage employees for achievement beyond expectations (Arnold, Turner, Barling, Kelloway, & McKee, 2007). The third dimension, intellectual stimulation, encourages followers to think innovatively and creatively, which in turn leads to questioning the status-quo. Problems are looked at in different contexts and novel approaches can be developed (Felfe, 2006). Finally, the fourth dimension, individual consideration, describes the leaders' ability to serve as a coach and mentor for employees. Followers are seen as individuals with their own expectations and needs. The leader identifies the potential of each follower and supports the development of each employee (Bass & Avolio, 1995).

Several studies have shown that transformational leadership increases organizational commitment and enables a long-term increase in performance (Felfe, 2006). Employees who are led by transformational leaders identify better with their team, intellectually stimulate each other and are high performing (Bass, 1999). Further, numerous studies have shown that transformational leadership does not only increase individual performance-related attitudes and behavior, but also has a major impact on team climate, and team and organizational performance (Liao & Chuang, 2007; Wang et al., 2011). Overall, transformational leaders generate visions, motivate their followers, create higher morals within their employees and help them to develop their individual skills (Bass, 1999). A transformational leader inspires, collaborates and motivates employees to achieve higher goals (Lee & Cummings, 2008). Since transformational leadership promotes an individual's identification with the organizational vision and goals, this kind of leadership is shown to mitigate burnout (Gill et al., 2006).

Burnout

The term burnout is defined as a psychological syndrome that is a "prolonged response to chronic emotional and interpersonal stressors on the job*"* (Maslach, 2003, p.189). It results in "a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform" (Maslach, Jackson, & Leiter, 1996, p.209). Individuals suffering from burnout face a chronic mismatch between job demands and personal resources (Maslach, Schaufeli, & Leiter, 2001). Hence, burnout is the result of prolonged job stress and stable over time (Leiter & Maslach, 2003; Schaufeli & Buunk, 2003). The syndrome is seen as a continuum between burnout and engagement, mirroring two opposites (Schaufeli, Leiter, & Maslach, 2009). Burnout has its roots in the 1970s in the human services sector. Today, however, it is also recognized to occur among other occupations. Further, it is shown to affect individuals on different organizational levels, like managers and blue- and white-collar workers (Schaufeli et al., 2009).

Burnout syndrome is characterized by three dimensions that occur due to chronic occupational stress: *exhaustion, cynicism,* and *professional efficacy* (Maslach et al., 2001). The exhaustion dimension is used to describe someone's lack of emotional and/or physical resources and refers to the individual stress experience. Consequently, it leads to a lack of energy and low mood (Bianchi, Schonfeld, & Laurent, 2015). Cynicism is a coping strategy, used to create distance between oneself and one's job by behaving indifferently. It leads to demotivation and an individual's withdrawal from work and displays the individual context dimension of burnout (Bianchi et al., 2015; Lee & Cummings, 2008; Leiter & Maslach,

2003). It serves as self-protection and leads to the dehumanization of others, as an immediate reaction to exhaustion (Leiter & Maslach, 2003). The last component, professional efficacy, describes a decrease of work related efficacy, due to overwhelming demands (Leiter & Maslach, 2003; Maslach et al., 2001). Individuals with a lack of professional efficacy feel incompetent, which in turn can lead to a loss of self-confidence (Bianchi et al., 2015; Leiter & Maslach, 2003). Thus, this model of burnout extends the individual stress experience (exhaustion) by adding individual stress responses - cynicism and professional efficacy (Maslach, 2003). While exhaustion and cynicism appear due to an overload and social conflicts at the workplace, the origin of a sense of inefficacy lies in a lack of resources (Maslach, 2003; Leiter & Maslach, 2003). In general, individuals with high expectations and goals for themselves and those for whom their work has a deeper meaning are more likely to experience burnout (Schaufeli & Buunk, 2003).

Some of the main symptoms of job burnout are feelings of exhaustion, inefficacy, decreased motivation and dysfunction at work (Kulkarni, 2006). Due to emotionally drained resources, individuals who suffer from burnout are not capable of managing daily stressful events anymore (Patana, 2015). Further, burnout has been identified to correlate positively with an individuals' psychological distress, depression and anxiety (Maslach et al., 2001; Hakanen & Schaufeli, 2012; Shin, Noh, Jang, Park, & Lee, 2013). In fact, Bianchi and colleagues (2013), found that none of their tested burnout patients were free of depressive symptoms. However, depression and burnout are not synonymous (Iacovides et al., 2002). In comparison with depression, burnout is tied to the work context, whereas depression refers to almost every sphere of life and is thus, context-free (Maslach et al., 2001; Schaufeli & Buunk, 2003). Thus, individuals who are burned out can still function in other daily life situations, while depression leads to one's dysfunction in all life domains (Maslach et al., 2001).

Besides the negative effects of burnout on an individual level, for instance commitment and satisfaction (Leiter & Maslach, 1988; OECD, 2015), burnout is shown to have crucial effects on an organizational level. Current research has shown that burnout is associated with high job turnover, higher absenteeism, decreased productivity, decreased job performance, and higher injury rates which in turn increases the cost for the employer (Gill et al., 2006; Swider & Zimmermann, 2010; Yip & Rowlinson, 2006; OECD, 2015). Thus, decreasing and preventing burnout among employees is a crucial factor for employees' well-being and organizational success.

Burnout and Areas of Worklife

  Burnout is a mismatch between a person and organizational context factors. The *Areas of Worklife* (AWS) model takes the latter into account, by considering different areas of an individuals' worklife (Leiter & Maslach, 1999). The model states that the greater the gap between organizational context factors (job) and the person, the more likely it is that the person will suffer from burnout (Leiter & Maslach, 2003). Thus, the model defines six different organizational factors that are shown to influence burnout and are considered its source: *workload, control, reward, community, fairness,* and *values*. These areas of worklife are shown to affect the three burnout dimensions (Leiter & Maslach, 2003).

  Workload. Workload refers to the overload of work. The job is too demanding and the individual does not have sufficient resources to fulfill these demands (Leiter & Maslach, 2003). However, such a high workload is only critical if the individual does not have the time or resources to recover from these extensive job demands (Leiter & Maslach, 2003). This area of worklife is shown to predict the exhaustion dimension of burnout (Lindén, Salo, & Jansson, 2016).

  Control. The control area refers to an individual's feeling of being able to make an impact on their work and having the autonomy to make choices and decisions at the workplace (Lee & Cummings, 2008; Leiter & Maslach, 2003). Having control over one's own work and participating in organizational decision making is shown to decrease exhaustion and increase the sense of efficacy (Leiter, Gascón, & Martínez-Jarreta, 2010; Maslach et al., 2001).

  Reward. The term reward refers to the fit between received rewards and a person's expectations. These rewards can be either internal, like pride of doing the job, or external, for example financial or social recognition. Research has shown that the feeling of being deprived and not socially recognized by colleagues and managers leads to feelings of inefficacy (Maslach et al., 1996). A perceived inequity in rewards among colleagues may further affect other areas of worklife negatively (Leiter & Maslach, 1999).

  Community. Community includes aspects of social interaction at the workplace and how social relationships can support the worker (Maslach, 2003). This social support refers to all levels of the organization (Lee & Cummings, 2008). While the support of colleagues is associated with the sense of efficacy, the support of managers is positively associated with the employee's level of exhaustion (Leiter & Maslach, 2003). Unresolved social conflicts have been shown to be the most negative part of this worklife area (Leiter & Maslach, 2003). In contrast, people thrive in a community where there is emotional exchange and social support

(Leiter & Maslach, 2003). Overall, the quality of social interactions at the workplace influences the relationship between people and their workplace (Schaufeli & Buunk, 2003). Additionally, social support at the workplace has positive effects on employee's engagement at work (Schaufeli, Bakker, & Van Rhenen, 2009).

Fairness. The worklife area fairness underlines the importance of equality and respect at the workplace (Leiter & Maslach, 2003). Individuals may feel treated unequal or unfair regarding workload, evaluations, decision making processes or rewards (Lee & Cummings, 2008). Further, fairness refers to all organizational policies and procedures that ensure equality (Maslach, 2003). The area overlaps slightly with aspects of community and reward, since treating employees equally also includes an appropriate reward and respect from the working community (Leiter & Maslach, 2003). Previous research has shown that the experience of fairness leads to a decrease of exhaustion and cynicism (Elovainio, Kivimäki, & Vahtera, 2002).

Values. The worklife area values relates to the fit between organizational and an individual's ideals and motives (Lee & Cumming, 2008). A mismatch between the two occurs if the employee must do something unethical, or if organizational values do not equal actual practice (Leiter & Maslach, 2003). Leiter and Harvie (1997) found that conflicting values affect all burnout dimensions negatively.

Burnout within the Construction Industry

Burnout might be a particularly critical factor within the construction industry, compared to other industries. Within this industry a complex interplay between various levels of management, construction workers and external stakeholders is required. In addition to tight budgets and time frames, this makes the construction industry a highly demanding and stressful industry (Poon, Rowlinson, Koh, & Deng, 2013; Wahab, 2010). Despite the negative effects of burnout that are faced by all industries (e.g. high turnover raters), several studies have shown a relationship between burnout and severe work-related injuries (Ahola et al., 2008; Brand-Labuschage, Mostert, Rothmann, & Rothmann, 2012), which makes burnout a decisive factor in the construction industry. In a survey conducted among 847 construction professionals in the UK, mainly engineers, 62% suffered from work-related stress. In addition, 85% of the participants thought that the consideration of mental health issues within the construction industry is insufficient (Campbell, 2006). Poor communication and a lack of feedback between followers and leaders were identified as major organizational factors for stress (Campbell, 2006). A high workload along with ambitious deadlines and time pressure, conflicting demands, and inadequate managerial support were named as job demanding

factors in the construction industry (Campbell, 2006; Love, Edwards, & Irani, 2009). Support from colleagues and discussions with the supervisor were identified as the main factors to reduce stress among construction professionals (Campbell, 2006). Using their own questionnaire, Enshassi, Swaity and Arain (2016) found that symptoms of emotional exhaustion were the most common cause that led to burnout within a Palestinian sample of construction workers.

Even though some research investigated burnout within the construction industry (Ahola et al., 2008; Ahola et al., 2013; Brand-Labuschagne et al., 2012; Enshassi et al., 2016 Yip & Rowlinson, 2006; Toppinen-Tanner, Kalimo, & Mutanen, 2002), none of the identified existing studies investigates the impact of transformational leadership on burnout among the construction industry within a Swedish sample. In order to decrease burnout within this industry, and further to prevent severe injuries, a deepened understanding of these issues is required. Taking into consideration that the construction industry suffers from labor shortage and high turnover rates and that mistakes also produce high costs (Love et al., 2009), the well-being of both blue-and white-collar workers should be of interest for employers within this industry.

Blue- and white- collar workers. The burnout phenomenon and course are similar within blue- and white-collar workers, still they are exposed to different job demands and draw on different resources (Nahrgang, Morgeson, & Hofmann, 2011; Toppinen-Tanner et al., 2002). Blue-collar workers face hazardous and physical demanding work, like chemicals and manual handling (Goldenhar, Williams, & Swanson, 2003). Additionally, the close supervision of blue-collar workers may hinder them in their individual growth and development, leading to less autonomy within their jobs (Schreurs, Van Emmerik, De Cuyper, Notelaers, & De Witte, 2011). Further, jobs on-site are often lacking proper feedback and appreciation and are rather characterized by criticism (Love et al., 2009). Many of these blue-collar workers are guest workers, meaning that their work has rather a project-based character. Thus, they have shifting relationships with their supervisors (Keegan & Den Hartog, 2004). In contrast to this, white-collar workers have more challenging jobs, more control and are continuously working at their workplace (Van den Broeck, De Cuyper, Lucycky, & De Witte, 2009). Further, their jobs are characterized by teamwork, support and opportunities (Love et al., 2009).

Hypotheses

Leadership behavior is identified as one of the main sources of burnout and job stress within the construction industry (Meliá & Becerril, 2007). As presented, transformational

leadership is shown to decrease several job-related stressors that are likely to increase burnout. Burnout often arises with increased job uncertainty, job tension and role conflicts. Transformational leadership is shown to counteract these negative antecedents (DeGroot, Kiker, & Cross, 2000; Judge & Picollo, 2004). Moreover, transformational leaders are able to transform stressful situations into challenging opportunities (Bass & Riggio, 2006). All of the transformational leadership dimensions can help to decrease followers' burnout.

First, by using idealized influence, the leader transforms individual uncertainty into an ambition of reaching higher group goals and visions, which helps followers to cope with their stress (Bass & Riggio, 2006). Through both idealized influence attributed and behavior, leaders reduce employees' stress level and thus their likelihood to suffer from burnout. Second, by inspirationally motivating followers, the leader is able to establish a positive environment, in which it is easier to identify the source of stress and cope with it (Bass & Riggio, 2006). Followers are enabled to reframe negative situations into positive ones, through a clear communication of positive aspects of stressful situations (Rowold & Schlotz, 2009; Zhang, Le Pine, Buckman, & Wei, 2014). Thus, it is assumed that the dimension of inspirational motivation reduces stress, which in turn reduces the likelihood of burnout. Third, leaders who stimulate their followers intellectually master crises by supporting their followers to question common assumptions and encourage innovative thinking. Finding new solutions in critical situations might reduce stress and thus decrease burnout. Fourth, by individually considering each employee, leaders are not only able to identify individual needs but are also able to support individuals according to their needs. In addition, they can provide individual strategies to cope with high levels of strain (Bass & Riggio, 2006; Rowold & Schlotz, 2009). Since leaders support their followers' growth and development, they may serve as a resource themselves (Perko, Kinnunen, Tolvanen, & Feldt, 2016). Thus, it is assumed that by considering each employee individually the leader is able to reduce followers' burnout. Therefore, a negative relationship between all dimensions of transformational leadership and all three dimensions of followers' burnout is expected among both blue- and white-collar workers [H1].

H1. Transformational Leadership has a negative relationship to followers' burnout.

Where an employee fits in the organizational hierarchy (i.e. blue- or white-collar) also plays a role for the impact of leadership on employees' burnout (Lee & Cummings, 2008). As previously discussed, burnout is the result of excessive job demands and insufficient resources (Bakker, Demerouti, & Euwema, 2005; Van den Broeck et al., 2012). Bakker and colleagues

(2005) found that job resources (e.g. feedback and support) can buffer the effects of burnout. For instance, a high-quality relationship with the supervisor may reduce the impact of job demands, due to the emotional support they receive (Bakker et al., 2005). These resources depend on the job, but include social, physical and psychological work aspects (Nahrgang et al., 2011). Further, they include social support and feedback (Nahrgang et al., 2011), aspects which are shown to be fulfilled by a transformational leader. Additionally, transformational leadership can increase employees' personal resources through empowerment (Walsh, Dupré, & Arnold, 2014). It is necessary to examine if blue- and white-collar workers face different job demands and conditions, and thus might be exposed to different risks of burnout. At lower hierarchical levels, employees may not experience their leaders as transformational, because they do not get the chance to accomplish goals in a different way (Lee & Cummings, 2008). In addition, blue-collar workers face higher job demands and worse job conditions, than white-collar workers (Love et al., 2009; Yip & Rowlinson, 2006). Even though, these high job demands mainly refer to physical demands, they also draw back upon less resources, like control, autonomy and support which makes them a high-risk group for burnout (Lindgard & Turner, 2015; Toppinen-Tanner et al., 2002). Due to the rather project-based character of blue-collar work, the identification and trust building processes involved in transformational leadership may thus be less likely to occur or less easy to achieve in such temporary, shifting relationships. In conclusion, it is assumed that blue-collar workers are less likely to perceive their leaders as transformationally than white-collar workers, since they gain less support, opportunities to develop and have a less close relationship to their leaders [H2.1]. In turn, it is hypothesized that blue-collar workers experience higher levels of burnout, than white collar workers [H2.2].

  H2.1 White-collar workers perceive their leaders as more transformationally than blue-collar workers.
  H2.2 White-collar workers experience lower levels of burnout than blue-collar workers.

  The areas of worklife as defined by Leiter and Maslach (1999) might mediate the relationship between transformational leadership and followers' burnout within the sample of construction workers. As previously presented, the areas of worklife are shown to influence the three burnout dimensions. Additionally, previous research has shown that transformational leadership affects an employee's experience of the areas of worklife. In this light, transformational leadership positively affects especially the areas workload, reward, fairness and control (Lee & Cummings, 2008). Transformational leaders enhance personal and social

resources, which in turn lead to a greater perception of fairness, regarding organizational policies (Walsh et al., 2014). In uncertain and stressful situations, employees seek support and fairness from their transformationally supervisors. Employees who gain that support and fairness are shown to be less vulnerable to burnout (Leiter & Harvie, 1998).

It is shown that the relationship between job stressors and all three burnout dimensions are quite similar for both blue- and white-collar workers (Toppinen-Tanner et al., 2002). Thus, it is assumed that the mediating effect of areas of worklife, as measured by the AWS, does not differ between blue- and white-collar workers. Because of the relation between transformational leadership style and areas of worklife, as well as the relation between the areas of worklife and burnout, it is assumed that the direct effect of transformational leadership on burnout can be explained by the indirect effect of AWS [H3].

H3. The relationship between transformational leadership style and followers' burnout is mediated by the six areas of worklife.

Methods

Participants

For this study, participants were recruited within a Swedish project development and construction company. Participants were elected using convenience sampling. Overall, 61 participants were recruited, which were further divided in two groups, in 30 blue-collar workers and 31 white-collar workers. The sample consisted of nine female employees and 52 male employees. Overall, the mean age was 42,53 years ($SD = 11.73$, $Min = 20$, $Max = 65$). Participants were aligned to the groups based on whether they spend most of their work time outside on-site (blue-collar workers) or inside in the office (white-collar workers).

Blue-collar workers. The average age within the blue-collar group was 38.67 years ($SD = 12.03$, $Min = 20$, $Max = 64$). All 30 blue-collar workers were male. The most common occupations within blue-collar workers were carpenter ($N = 9$) and electrician ($N = 4$). Blue-collar workers were employed by the company for 7.63 years on average ($SD = 9.04$, $Min = 0.6$, $Max = 36$). Twenty-three blue-collar workers were from Sweden, four from Slovakia, the remaining participants were from Croatia, Czech Republic and Estonia.

White-collar workers. The mean age within the white-collar workers was 44.40 years ($SD = 10.87$, $Min = 23$, $Max = 65$). The group consisted of nine female workers and 22 male workers. Within this group the most common occupations were engineers ($N = 3$) and technical lead ($N = 2$). On average, white-collar workers were employed by the company for

10.33 years (*SD* = 8.58, *Min* = 0.5, *Max* = 28). Twenty-four participants were from Sweden, four from the UK, the remaining participants were from Honduras, Ireland and Lebanon.

Materials

Three well established questionnaires were used to investigate the relationship between transformational leadership and followers' burnout. Additionally, participants were asked for demographics.

Demographics. Participants were asked for gender, age, country of origin and how long they have lived for in Sweden. Additionally, they were asked for some job specific details like job title, whether they have subordinates and how long they have worked for the company.

Multifactor Leadership Questionnaire 5 x Short (MLQ-5x). The English version of the rater form of the *Multifactor Leadership Questionnaire 5 x Short* (Bass & Avolio, 1995) was used to determine the perceived leadership style. The questionnaire is usually used to assess the *full range model of leadership* (Bass & Avolio, 1995). However, for this study, only the scale for transformational leadership was adopted, since it is shown that the other scales do not significantly correlate with burnout (Corrigan et al., 2002). The used scale consists of the transformational leadership style dimensions as explained above: idealized influence attributed (e.g. *acts in ways that builds my respect*.) and behavior (e.g. *emphasizes the importance of having a collective sense of mission*.), inspirational motivation (e.g. *articulates a compelling vision of the future*.), intellectual stimulation (e.g. *seeks differing perspectives when solving problems.*), individual consideration (e.g. *spends time teaching and coaching.*). Each dimension was measured with four questions. Overall, 20 items of the questionnaire were used, measuring the perception of transformational leadership style on a five-point Likert-Scale (0 = *not at all* to 4 = *frequently, if not always*). The test allows for an overall score of transformational leadership style by combining all dimensions. Cronbach's Alpha for the four dimensions was .86 (idealized influence attributed and behavior), .83 (inspirational motivation), .63 (intellectual stimulation), and .75 (individual consideration).

Maslach Burnout Inventory – General Survey (MBI-GS). The *Maslach Burnout Inventory – General Survey* was used (Maslach et al., 1996). The questionnaire assesses the three dimensions of burnout: exhaustion, cynicism, and professional efficacy. Originally developed in the human services sector, the *General Survey* version of the MBI allows for the assessment of burnout in other occupations (Maslach et al., 1996). Thus, the measurement is appropriate for different organizational levels. It is shown that these three dimensions fit for both, blue-and white-collar workers (Toppinen-Tanner et al., 2002).

This questionnaire is the first standardized measurement and due to its great reliability and validity it is also the most commonly used instrument to measure burnout (Friberg, 2006; Schaufeli et al., 2009). The questionnaire defines burnout as a crisis between an individual and their work (Maslach et al., 1996). This relationship is measured on a continuum between positive engagement and burnout. Individuals who are highly engaged with their work are energetic, involved, and feel efficient (Leiter & Maslach, 2003). The Inventory measures three subscales – exhaustion (e.g. *I feel used up at the end of the workday*), cynicism (e.g. *I have become less interested in my work since I started this job.*) and professional efficacy (e.g. *I can effectively solve the problems that arise in my work) –* through 16 Items. The Items are measured with a seven-point frequency scale (0= never to 6= everyday). Individuals who are burned-out will score high in the dimensions exhaustion and cynicism and low in professional efficacy (Leiter & Maslach, 2003). Cronbach's alpha for the scales was .89 (exhaustion), .85 (cynicism), and .76 (professional efficacy).

Areas of Worklife (AWS). The *Areas of Worklife Scale* is used to assess organizational factors that are shown to be a source of burnout (Leiter & Maslach, 2002). The instrument measures the six different areas of work life with 29 items: workload (6), control (3), reward (4), community (5), fairness (6), and values (5)*.* For each item, participants rate their agreement on a five-point Likert-scale (1 = *strongly disagree* to 5 = *strongly agree).* Each scale consists of positively worded (e.g. *my work is appreciated*) as well as negatively worded (e.g. *my efforts usually go unnoticed.*) items. The scores for the negative items are reversed. A high score (more than 3.00) indicates a good fit between a person and the workplace, while a low score (less than 3.00) indicates an incongruence between personal preferences and the workplace (Leiter & Maslach, 2003). Cronbach's alpha for the sic scales was .67 (workload), .68 (control), .75 (reward), .67 (community), .68 (fairness), and .75 (values). The MBI-GS and the AWS are often used in combination, since it is shown that the areas of worklife correlate highly with all burnout dimensions measured by the MBI-GS (Leiter & Maslach, 2003).

Procedure

The data collection took place at two different construction sites. In order to suit the availability of workers, the data was collected at four different time points. Each time, between 12 and 17 workers were gathered in a big quiet room to fill-in the questionnaires. Before starting, each group of participants was informed about the purpose of the study, that the data is treated anonymously, and that participation is voluntarily. Next, the questionnaires were handed-out in paper form. In line with ethical principles of research, the first page of the

questionnaire consisted of a brief consent form, where general information and contact details were displayed. It took them around 25 minutes on average to fill out the questionnaire. The participants were thanked for their time. One contact person in the company reached out to the employees. Thus, it cannot be said with certainty how many of the people to whom it was reached out to participated. However, all of the people who showed up handed in a questionnaire.

Data Analysis

In order to analyze all of the proposed hypotheses the statistic software SPSS was used (I.B.M., 2013). Using boxplots, the data was assessed for outliers with a 1.5 interquartile range. One outlier was identified among several variables and thus removed from the data set, leaving 60 participants.

Hypotheses 1 warranted analysis through simple linear regression analyses with the overall sample (N=60). Analyzing the data, showed that the assumptions for linearity, normality of residuals, and homoscedacity were met. Therefore, the named linear regressions could be used to determine the relationship between the dimensions of transformational leadership and the burnout dimensions measured by the MBI-GS. For this purpose, the overall score of transformational leadership is put into three separate simple linear regression models for each of the burnout dimensions (exhaustion, cynicism, professional efficacy). Additionally, stepwise multiple regression analyses were used to identify those transformational leadership variables that create the best model for burnout prediction. Stepwise multiple regression adds the most significant variables and removes the least significant variables, which leads to a model that only includes transformational leadership dimensions that contribute significantly to burnout prediction. For each burnout dimension a separate stepwise multiple regression was performed. The additional assumptions required by this test—absence of multicollinearity, non-zero variance and autocorrelation were met as well.

In order to test the second hypotheses, the data was split in two groups (blue- vs. white-collar workers). Thus, the two groups were checked for normal distributions separately. Performing the Kolmogorov-Smirnov test within the group of blue-collar workers, all variables were normally distributed. Within the group of white-collar workers, cynicism, $D(30) = 0.21$, $p < 0.05$ and the overall value for transformational leadership, $D(30) = 0.18$, $p <$

0.05, deviated significantly from a normal distribution. Thus, the non-parametric Mann-Whitney-U test was used to test Hypothesis 2.1 and Hypothesis 2.2.
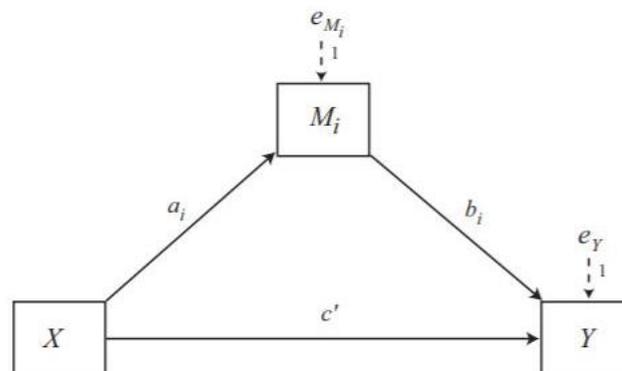

Figure 1. Statistical model of the hypothesized moderation model, according to Hayes (2017). Note. X = predictor, Y = outcome variable, M_i = mediators

The hypothesized mediation model (H3) was analyzed using model 4 of the SPSS macro PROCESS (v3.0) written by Andrew F. Hayes (2017, see Figure 1). Each of the six areas of worklife was tested using a separate mediation model. Figure 1 represents such a statistical model, in which X stands for transformational leadership, M_i represents the AWS dimension and Y the burnout dimensions. Path a_i, stands for the direct effect of transformational leadership on the AWS dimensions. Path b_i represents the direct effect of the mediator (AWS dimensions) on the dependent variable (burnout dimensions). Path c' represents the direct effect from the perceived transformational leadership on the burnout dimensions. The indirect effect is the product of path a and b, describing how the independent variable affects the dependent variable through the mediator (path a_ib). For this hypothesis, the AWS dimensions were expected to mediate the relationship between transformational leadership and burnout. In order to perform a mediation analysis, several assumptions need to be met (Field, 2017). First, transformational leadership needs to predict the dimensions of the AWS scales (a_i). Second, there needs to be a direct relationship between the AWS dimensions and the burnout dimensions (b_i). Third, transformational leadership needs to directly predict the burnout dimensions (c'). Fourth, transformational leadership and AWS together predict burnout (a_ib_i). Fifth, if the AWS dimensions mediate the relationship between transformational leadership and burnout, transformational leadership does not predict the burnout dimension anymore (full mediation) or its prediction is lessened (part mediation). In order to calculate *p*-values and confidence intervals, 10.000 bootstrapping samples are used. This is because the often used Sobel test relies on normal distribution and is considered as "outdated" for the identification of indirect effects (Preacher & Hayes, 2008).

Results

Descriptive Statistics

Table 1 displays the descriptive statistics for the mean values of all variables used, as well as the overall score for transformational leadership. Overall, the participants perceived their leaders as transformational, indicated by a moderate mean value of the overall score ($M = 2.75$, $SD = 0.63$, $Min = 1.15$, $Max = 4.00$). The descriptive statistics for the areas of worklife indicate a good fit between the employees and the workplace, since all mean values are above 3 (Table 1). Considering the burnout dimensions, the mean values for exhaustion ($M = 1.90$) and cynicism ($M = 1.64$) are low, while the mean values for professional efficacy are high ($M = 4.81$), indicating low tendencies for burnout among the participants.

Table 1.

Descriptive statistics of all assessed variables, including the overall value of transformational leadership style.

	M	SD	Min	Max
Transformational Leadership				
Idealized Influence attributed	2.79	0.74	1.00	4.00
Idealized Influence behavior	2.76	0.72	1.00	4.00
Inspirational Motivation	2.80	0.72	1.00	4.00
Intellectual Stimulation	2.70	0.64	0.75	4.00
Individual Consideration	2.68	0.78	1.00	4.00
Overall Score	2.75	0.63	1.15	4.00
Areas of Worklife				
Workload	3.45	0.72	1.60	5.00
Control	4.13	0.57	2.00	5.00
Reward	3.71	0.68	1.75	5.00
Community	4.14	0.52	2.80	5.00
Fairness	3.63	0.56	2.50	4.83
Values	3.91	0.67	2.25	5.00
Burnout				
Exhaustion	1.90	1.39	0.00	5.20
Cynicism	1.64	1.39	0.00	5.00
Professional Efficacy	4.81	0.87	2.00	6.00

Note. n =60. M = mean value; *SD* = standard deviation; *Min* = minimum; *Max* = maximum.

Linear Regression Analyses

Simple linear regressions. Taking the overall score for transformational leadership into consideration, the results of the simple linear regressions indicated that exhaustion could not be predicted by participant's ratings of transformational leadership, $F(1,58)= 2.34$, *ns*, R^2 $= .04$, $\beta= -.20$. However, cynicism as well as professional efficacy could be predicted by participant's ratings of transformational leadership. While transformational leadership explained 20% of the variance in cynicism, $F(1,58)= 14.67$, $p < .001$, $R^2 = .20$, $\beta= -.45$, it accounted for only 11% of the variance within professional efficacy, $F(1,58)= 7.40$, $p < .01$, $R^2 = .11$, $\beta= .34$.

This means that by increasing the perceived transformational leadership by one scale point the cynicism rate would drop by almost half a scale point ($\beta= -.45$) and increase by .34 scale points for professional efficacy. These results indicate that workers who perceive their leaders as transformational score lower in cynicism and higher in professional efficacy, than those who perceive their leaders as less transformational. Transformational leadership has no effect on participants' feelings of exhaustion within this sample.

Stepwise multiple regression. Since transformational leadership could not predict the exhaustion dimension of burnout, no stepwise multiple regression is performed for this dimension. Entering cynicism as the dependent variable and all dimension of transformational leadership as independent variables into the model, the results revealed that the transformational leadership dimension inspirational motivation is the best predictor for this burnout dimension. The *F*-test revealed that the model itself is significant, $F(1,58) = 15.91$, $p < .001$. All other dimensions of transformational leadership have been excluded for the model, leaving inspirational motivation as the best predictor for cynicism, $t = -3.99$, $p < .001$. An increase of inspirational motivation by one scale point decreases participants cynicism by -.46 scale points. Overall, inspirational motivation can explain 22 % of the variance within cynicism.

For the burnout dimension professional efficacy, the analysis revealed that inspirational motivation is the best predictor for this burnout dimension. The model is significant, $F(1,58) = 8.23$, $t = 2.87$, $p < .01$. Since the other dimensions of transformational leadership did not contribute to improve the model, they have been excluded. Inspirational motivation can explain 12 % of the variance within professional efficacy. If this dimension increased by one scale point within the leader, the participants' feeling of professional efficacy increases by .35 scale points.

Differences between Blue- and White-Collar Workers

      Transformational leadership. In order to detect possible differences in leadership perception between blue- and white-collar workers, the Mann-Whitney was performed. White-collar workers (*Mdn* = 3.13, *IQR* = 2.69 - 3.56) experienced their leader as significantly more idealized influenced attributed than blue-collar workers (*Mdn* = 2.50, *IQR* = 2.03 - 3.0), *U* = 275.0, *z* = -2.60, *p < .01, r* = -.34. For the dimension idealized influence behavior no significant differences between the two groups could be detected, *U* = 335.5, *z* = -1.71, *ns, r* = -.22. Further, white-collar workers (*Mdn* = 3.0, *IQR* = 2.76 - 3.50) perceived their leaders as more inspirationally motivating than blue-collar workers (*Mdn* = 2.63, *IQR* = 2.19 - 3.0), *U* = 307.5, *z* = -2.13, *p < .05, r* = .27. White-collar workers (*Mdn* = 3.00, *IQR* = 2.50 – 3.30) perceived their leaders as significantly more intellectually stimulating than blue-collar worker (*Mdn* = 2.5, *IQR* = 2.19 – 3.0), *U* = 305.0, *z* = -2.16, *p* <.05, *r*= -0.28. Leaders were perceived as significantly more individually considering by white-collar workers (*Mdn* = 3.00, *IQR* = 2.50 – 3.5) than by blue-collar workers (*Mdn* = 2.25, *IQR* = 2.00 - 3.00), *U* = 299.0, *z* = -2.24, *p < .05, r* = -.29. Additionally, the groups differed significantly from each other in the overall perception of transformational leadership. Blue-collar workers (*Mdn* = 2.64, *IQR* = 2.15 - 2.99) perceived their leaders as significantly less transformational than white-collar workers (*Mdn* = 3.05, *IQR* = 2.63 - 3.35), *U* = 274.0, *z* = -2.60, *p < .01, r* = -.34. Overall, white-collar workers perceived their leaders as more transformational than their blue-worker colleagues. Only the transformational leadership dimension idealized influence behavior was not affected by group affiliation.

      Burnout dimensions. Regarding the three burnout dimensions, no significant differences between the two groups were detected. Nor were significant differences detected for the exhaustion dimension*,* or the cynicism dimension or the professional efficacy dimension (Table 2).

Table 2*.*

Mann-Whitney-U test for between group comparison for all burnout dimensions measured by the MBI-GS.

	Exhaustion (IQR)	Cynicism (IQR)	Professional Efficacy (IQR)
Mann-Whitney-U	439.5	335	411
Z	-.16	-1.71	-.58
Asymptotic Significance	.876	.088	.563
Median Blue-Collar	1.80 (0.55 - 2.95)	1.90 (0.74 - 3.20)	4.83 (4.50 - 5.52)
Median White-Collar	1.70 (0.75 - 3.00)	1.00 (0.20 - 2.00)	4.92 (3.96 - 5.42)

Note. IQR = Interquartile ranges Q1 – Q3.

Mediation Analyses

In a first step, the relationship between transformational leadership and the AWS dimensions was determined (a_i). Transformational leadership did not significantly predict workload, b = .03, t = 0.19, *ns*. All other dimensions of the AWS were significantly predicted by transformational leadership – control, *b* = .44, *t* = 4.32, *p* < .001, reward, *b = .57, t* = 4.79, *p* < .001, community, *b = .35, t* = 3.56, *p* < .001, fairness, *b* = .44, *t* = 4.29, *p* < .001, and values ,*b* = .56, *t* = 4.79, *p* < .001. Due to the missing relationship between transformational leadership and workload, this AWS dimension cannot mediate the effect between transformational leadership and the burnout dimensions and was excluded for further mediation analyses. The unstandardized coefficients and standardized bootstrap intervals are presented in table 3.

Exhaustion. No direct effect of transformational leadership on exhaustion could be detected, *b* = -.43, *t* = -1.53, *ns*. Due to the lack of a direct effect between transformational leadership and exhaustion (path *c'*), the relationship between the two cannot be mediated by any of the AWS dimensions.

Table 3.

Results of the separate mediation models showing the direct effects of the areas of worklife on the MBI-GS dimensions cynicism and professional efficacy, and the indirect effects with standardized bootstrapping.

	Cynicism (Y)							Professional Efficacy (Y)						
	Direct effect (b_i)			Indirect effect (a_ib_i)				Direct effect (b_i)			Indirect effect (a_ib_i)			
	b	*SE*	t	ß	SE	LL	UL	b	SE	t	ß	SE	LL	UL
Workload	-.23	.23	-1.03	-.00	.03	-.06	.06	.09	.15	.59	.00	.02	-.03	.07
Control	-.24	.33	-.73	-.05	.06	-.18	.07	.53	.21	2.55**	.17	.09	.02	.35
Reward	-.66	.27	-2.41*	-.17	.09	-.39	-.02	.54	.18	3.09**	.22	.10	.07	.45
Community	-.11	.35	-.33	-.02	.06	-.13	.09	.39	.22	1.74	.10	.06	-.01	.21
Fairness	-.44	.33	-1.33	-.09	.07	-.23	.05	.60	.21	2.87**	.19	.07	.06	.32
Values	-.99	.26	-3.76***	-.25	.07	-.39	-.12	.44	.18	2.41**	.18	.07	.03	.33

Note. Path for bootstrapping: TFL → Workload/Control/Reward/Community/Fairness/Values → Cynicism/Professional Efficacy. *** p < .001, ** p < .01, * p < .05

Cynicism. Transformational leadership significantly predicted cynicism, *b = -.98, t* = -3.81, *p* < .001. There was a significant direct effect of the organizational factors reward, *b* = -.66, *t* = -2.41, *p* < .05, and values, *b* = -.99, *t* = 3.76, *p* < .001, on cynicism. All other organizational factors did not significantly predict cynicism (Table 3). The existence of a significant indirect effect could be confirmed by looking at the standardized bootstrap

confidence intervals—reward, β = -.17, 95% BCa CI [-.39;-.02], and values, β = -.25, 95% BCa CI [-.39;-.12]. Including reward and values as a mediator into two separate models, the influence of transformational leadership on cynicism was no longer significant, indicating that the relationship between transformational leadership and cynicism is fully mediated by reward and values in separate models.

Professional efficacy. Transformational leadership significantly predicted professional efficacy, b = .46, t = 2.69, p < .01. Four organizational factors were found to have a significant direct effect on professional efficacy—control, b = .53, t = 2.55, p <.01, reward, b = .54, t = 3.09, p < .01, fairness, b = .60, t = 2.87, p < .01, and values, b = .44, t = 2.41, p < .01. All other AWS dimensions did not significantly predict professional efficacy (Table 3). There was a significant indirect effect of transformational leadership on professional efficacy through control, β = .09, 95% BCa CI [.02;.35], reward, β = .10, 95% BCa CI [.07; .45], fairness, β = .07, 95% BCa CI [.06; .32], and values, β = .07, 95% BCa CI [.03; .33]. Within each of the mediation models, transformational leadership was no longer significantly predicting professional efficacy, indicating that each of the mediators fully mediated the relationship between transformational leadership perception and professional efficacy experience.

Discussion

The aim of this study was to gain further insights in the relationship between transformational leadership perception and burnout in the construction industry in Sweden. Existing research addressed the mitigating effect of transformational leadership on burnout in other industries. However, little attention has been drawn on the investigation of this relationship and the mediation of organizational factors (Areas of Worklife) between the two within the construction industry. Due to the identified link between burnout and negative organizational outcomes as well as the link between burnout and negative individual outcomes (e.g. sever injuries), burnout prevention is specifically important within the construction industry, yet underestimated in terms of attention. Moreover, no emphasis has been put on the differences between blue- and white-collar workers with regards to transformational leadership perception and burnout experience. This thesis addressed this gap by determining differences in these variables among construction workers. Even though, not all hypotheses could be supported, this thesis contributes to the existing body of research by investigating these relationships more closely.

Hypothesis 1. Regarding the first hypothesis, the overall score of transformational leadership was expected to predict the three burnout dimensions, measured by the MBI-GS.

While exhaustion and cynicism were expected to show negative correlations with transformational leadership, professional efficacy was assumed to show a positive correlation with transformational leadership. These expectations could only partly be supported. The overall score of transformational leadership, did not predict exhaustion. This is in contrast with previous research findings. Using the MLQ-5x and the MBI-GS, Hetland and colleagues (2007) found that transformational leadership correlates moderately with exhaustion ($r = -.48$), using 289 participants within the technology industry. Additionally, Corrigan and colleagues (2002) found that the more subordinates perceive their leader as transformational, the less likely they were to report exhaustion, within a mental health service sample using the same questionnaires. There are three possible explanations for these contradictory results. First, this study might be underpowered, which would mean that the chance of detecting a genuine effect is low (type II error). Second, participants in the mentioned studies were recruited in different industries. While in the technology and mental health service sectors emotional exhaustion might be quite common, construction workers may rather experience physiological fatigue. Third, research has shown that men are less likely to experience exhaustion than women (Schaufeli & Bakker, 2009). While previous research on this topic used equal gender distributions, the study at hand consisted of 85% male participants, which may have led to this different outcome.

Regarding the cynicism dimension of burnout, the overall score of transformational leadership, was found to explain 20% of the variance within cynicism. As hypothesized, this relationship was found to be negative. These findings are in line with previous research (e.g. Hetland et al., 2007; Corrigan et al., 2002). Through stepwise multiple regression, the transformational leadership dimension inspirational motivation was identified as the best predictor of cynicism. By increasing inspirational motivational behavior by one scale point, the experienced cynicism can be decreased by almost half a scale point. Taking into consideration that cynicism occurs due to social conflicts at the workplace and that one of the main characteristics of inspirational motivation is a clear communication (Bass & Avolio, 1995; Maslach, 2003), these results appear reasonable. Additionally, cynicism is characterized by demotivation of the individual (Bianchi et al., 2015). Leaders who display inspirational motivation are able to fulfill their followers with enthusiasm and are thus able to motivate them (Bass & Avolio, 1995).

Regarding professional efficacy, the overall score of transformational leadership indicated a positive relationship with this burnout dimension, explaining 11% of its variance. The stepwise multiple regression revealed that the transformational leadership dimension

inspirational motivation is the best predictor for professional efficacy, while excluding all other transformational leadership dimensions. In this model, inspirational motivation could explain 12% of the variance within professional efficacy. Professional inefficacy is characterized by overwhelming demands, feelings of incompetence and a lack of resources (Bianchi et al., 2015; Leiter & Maslach, 2003). Besides a clear communication, leaders who lead with a high degree of inspirational motivation encourage employees for achievements beyond expectations (Arnold et al., 2007). Thus, the employee is likely to perform beyond their own expectation, which in turn leads to feelings of professional efficacy. Overall, the results of the underlying study could identify transformational leadership as a predictor for two out of three measured burnout dimensions. However, since the overall score was not found to predict exhaustion, Hypothesis 1 can only partly be supported.

   Hypotheses 2. Regarding the second hypotheses, it was assumed that blue- and white-collar workers would significantly differ from each other in terms of transformational leadership perception and burnout experience. Interpreting the results revealed that white-collar workers perceived their leaders as significantly more transformational than blue-collar workers. The only dimension in which these differences were not significant was idealized influence behavior. Since the overall score for transformational leadership perception and most of the transformational leadership dimensions were perceived as significantly higher by white- than by blue-collar workers, Hypothesis 2.1 was supported. Regarding the experience of burnout, no differences between the two groups could be detected. Thus, Hypothesis 2.2 was rejected. This is an interesting finding, since with Hypothesis 1 it was found that there is a significant relationship between transformational leadership and burnout. In turn, it seems intuitive to assume that if white-collars perceive their leaders as significantly more transformational than blue-collar workers, they would experience significantly less burnout. Even though, transformational leadership is shown to have a positive impact on burnout prevention, it is not the solely factor of burnout experience. Other factors like organizational context and personal relationship to one's work influence the likelihood of burnout. Blue-collar workers might experience a greater fit between the areas of worklife and their own expectations. For instance, they may experience a greater sense of community and feel treated more fairly than their white-collar colleagues, which could make up for diminished transformational leadership on site. However, this study investigated only the differences between the groups, and not the differences between the correlations of transformational leadership and burnout. Overall, both groups reported low tendencies for exhaustion and

cynicism, while the ratings for professional efficacy were high within both groups, indicating that neither of them experiences high tendencies of burnout.

Hypothesis 3. The third hypothesis assumed that the AWS scales would mediate the relationship between transformational leadership and burnout. As indicated by the results of Hypothesis 1, no direct effect between transformational leadership and the exhaustions dimension of burnout could be found, which led to the exclusion of the exhaustion dimension in the mediation model. There was a significant direct effect between transformational leadership and the AWS dimensions, except with workload.

In this study, the AWS dimensions reward and values have been found to fully mediate the relationship between transformational leadership and cynicism, when considered in separate models. It means that the relationship between transformational leadership and cynicism can be explained by the areas of worklife reward and values. Which in turn indicates that the more a person is in line with these areas of worklife, the less likely the employee is to develop high cynicism scores and to experience the leadership as non-transformational. All other AWS dimensions were not found to predict cynicism.

Regarding professional efficacy, the AWS dimensions control, reward, fairness and values have been shown to fully mediate the relationship between transformational leadership and this burnout dimension. Whereas, the direct effect of transformational leadership on professional efficacy was no longer significant under the indirect effect of these AWS dimensions. Due to the positive values of the identified mediations, the more a person is content with these areas of worklife the more likely the person is to feel efficient in their job. These results imply that any decrease or increase of feelings of autonomy (control), recognition of performance (reward), processes of promotion (fairness) or shared vision with the organization (values), will significantly influence the feeling of efficacy and leadership experience at the workplace. All other AWS dimensions were not shown to predict professional efficacy, and thus did not mediate the relationship between transformational leadership and this burnout dimension. Thus, the third hypothesis could only partly be supported.

It is important to note, that in contrast to previous findings, transformational leadership was shown to not significantly correlate with workload (Lee & Cummings, 2008). These contradictory findings might occur due to some specifics within the construction industry. While the workload within other industries might mainly refer to the amount of work, it is likely that the workload in the construction industry mainly refers to the physically demanding work on site. Unlike the amount of work which is delegated by the leader, the

leader cannot take on the physically demanding work of the construction workers. The missing direct effects between the other dimensions of the AWS and the tested burnout dimensions are also contradictory to previous findings. For instance, Maslach and Leiter (2003) found in a cross-country and cross-industrial study, including 8.399 participants, that all AWS dimensions are correlated with the three burnout dimensions. This may be due to the limited group sizes in this study, which make it more difficult to detect actual effects (type II error).

Practical Implications

In general, there are two approaches used to prevent burnout—adjusting the person to the job or changing the job characteristics in accordance with a person's needs. This research focused on the latter approach and identified two separate factors that can be used to adjust the working environment. First, by encouraging leaders to lead transformationally. Second, by improving the six areas of worklife.

Since the results of this study suggest that transformational leadership can partly mitigate burnout, organizations should encourage their leaders to display this leadership behavior. Even though the leaders scored overall quite high on this leadership style, further leadership training should be offered, since such training is shown to be an effective intervention (Kelloway & Barling, 2010). Focus should be, especially the training of those who lead blue-collar workers, since they perceived their leaders as significantly less transformational than white-collar workers. In more detail, leaders should be taught to display inspirational motivational behavior. This is to encourage a clear communication between leader and employee. In those leadership trainings, leaders should learn to formulate a clear vision and how to motivate employees to achieve these goals. Additionally, multi-source feedback (e.g. 360-degree feedback), as suggested by Piccolo and Colquitt (2006), can be used to enhance leader performance within both groups.

However, as suggested by Enshassi and colleagues (2016), additional trainings for stress coping strategies should be implemented. This way, the employees learn how to use internal resources in order to avoid burnout, rather than solely relying on external factors for their own well-being.

Assessing the areas of worklife is a good way of identifying organizational factors that are crucial to employees' well-being. This way, the organization can intervene within areas that are important to the individual employee. Within this sample specifically the areas control, reward, fairness and values were shown to be important for employees in the

construction industry. Thus, the company should focus on identifying the underling mismatches and aligning these organizational factors with employees' needs.

Limitations

There were several limitations to the current study. First, due to the cross-sectional nature of the study it was not controlled for situational influences. This means that the investigation of burnout tendencies and transformational leadership perception might be biased by the specific situations the participants were in at the time of investigation (e.g. stressful day/ disagreement with leader). Additionally, the cross-sectional design does not allow any conclusions to be drawn about causal relationships between the variables (Lindén et al., 2016). This means that it could be possible that people with higher burnout scores are more likely to experience their leader as less transformational, instead of low transformational leadership leading to higher burnout scores. Further, the effect of the AWS on burnout might be mediated by transformational leadership. Second, the reliance of the collected data on self-reports make the results vulnerable to single source biases (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). This might be an issue, especially for the assessment of leadership style. For burnout, however, self-reported data is shown to be the best source for the individual burnout experience (Hildenbrand et al., 2018). Third, the limited number of participants might have led to a possible type II error (i.e. low power). Fourth, the non-equal gender distribution within this sample may have biased the outcome of this study, since it is shown that men and women are likely to experience the burnout dimensions to different degrees (Schaufeli & Bakker, 2009). Women are generally more likely to report a little higher burnout dimensions (Schaufeli & Bakker, 2009), which may have influenced the burnout scores of white-collar workers. However, this distribution is representative for the construction industry (Lowe & Woodcroft, 2014). Fifth, since the questionnaires were carried out in English the results might have been affected by participants' language proficiency. For instance, aspects of the questionnaire, or individual words, might have been misunderstood. This might also be the reason for the reliability test resulting in rather low Cronbach's Alpha for some of the variables. Sixth, the MBI-GS only allows to detect tendencies for burnout rather than the identification of employees that are burned out. Seventh, since this study focused on Swedish employees within the construction industry and within one company, the findings are not generalizable to workers from other countries.

Future Research

Based on the findings as well as on the limitations of the study, several suggestions for future research can be made. In order to control for situational influences, future research should consider longitudinal studies, where the areas of worklife and transformational leadership are collected at a timepoint 1 and burnout experience is collected at a timepoint 2, as suggested by Hildenbrand, Sacramento and Binnewise (2018). Additionally, burnout could be assessed at both time points since it is the result of prolonged stress over time and varies day by day (Halbsleben & Wheeler, 2011). This would also rule out issues of reverse causality. In order to minimize the possibility of type II errors, future research should focus on data collection of bigger sample sizes and within several companies, thus minimizing not only type II errors but also influences of the organizational culture. Assessing bigger samples is also desirable in order to make between-group comparisons of detected relationships between perceived transformational leadership style and burnout. Collecting data from followers who have the same supervisors might be useful in order to prevent single source biases and enables between group comparisons within the assessment of transformational leadership.

In order to gain a broader understanding and to enable a generalization of research results, future studies should consider cross-cultural studies (Zwingmann et al., 2014). Additionally, the development of a Swedish version of the MLQ-5x and the MBI-GS is needed in order to minimize the effect of language biases.

The study at hand, made a first step towards the investigation of different leadership perception and burnout experience between blue-and white-collar workers within the construction industry. However, future research should also focus on the comparison of higher hierarchical levels (white-collar), like top- and middle managers, in order to gain a deeper understanding of the interaction between transformational leadership, organizational factors and burnout. Additionally, the investigation of differences in the identified mediation effect between blue- and white-collar workers would be useful in order to gain further insights into the areas of worklife. This way, a more specific identification of the areas of worklife and thus a better adjustment of those could be conducted for both groups individually.

Conclusion

This study contributes to the existing body of research by investigating the effects of transformational leadership on burnout, and the mediating effect of organizational context factors within the Swedish construction industry. Moreover, this study carried out a first comparison between blue-and white-collar workers perception of transformational leadership

and burnout experience within the Swedish construction industry. The identified relationship between perceived transformational leadership and experienced burnout underlines the importance of leadership in burnout prevention. The identified differences in transformational leadership perception between blue- and white-collar workers indicate that companies should enhance this kind of leadership especially within the first group. The identification of a full mediation effect of specific areas of worklife between leadership and burnout, urges the importance of focusing on these areas in order to diminish the effect of poor leadership on burnout. As to date, most studies have been carried out within the health care sector. The study at hand helps to build a broader framework to enhance understanding and prevention of burnout. However, more studies need to be conducted in order to investigate the relationship between burnout and leadership within this specific industry in more depth, and thus increase the positive outcomes of transformational leadership and decrease negative outcomes of burnout among employees and construction companies.

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