PERCEIVED DISABILITY SEVERITY AND EMPLOYEE OUTCOMES: THE ROLE OF LEADER-MEMBER EXCHANGE AND LEADER EMPATHY

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Abstract

This research investigates the extent to which the relationships between perceived disability severity and employee outcomes are moderated by leader empathy and mediated by the quality of leader-member exchange (LMX). The proposed model is built on the premise that a high level of leader empathy can serve as a source of social support thereby mitigating the negative effect of perceived disability. We conduct two independent studies to examine the conditional indirect effect of perceived disability severity on resilience, job accommodation, job satisfaction, performance, and presenteeism through LMX relationships. Data are obtained from employees with musculoskeletal injuries (Study 1, $N = 264$) and leaders who have supervised employees with musculoskeletal injuries in the past two years (Study 2, $N = 224$). The results of conditional process analyses partially support the hypothesized moderated mediation model. From the employee perspective, some LMX dimensions mediate the interactive effect of perceived disability on job accommodation, presenteeism, resilience, and job satisfaction. From the supervisor perspective, a high level of leader empathy enhances the positive association between perceived disability and job accommodation through supervisor-subordinate relationships. This research highlights similarities and differences in employees' and supervisors' perspectives.

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Chapter 1: Introduction

Leader-member exchange (LMX) theory (Dansereau, Graen, & Haga, 1975) has received considerable research attention over the last 40 years. The theory focuses on the dyadic relationship between leader and follower. A central tenet of LMX theory is that supervisors develop unique dyadic relationships with subordinates and the quality of relationships is ranked from low to high (Graen & Uhl-Bein, 1995). These relationships form relatively quickly and remain stable over time (Graen & Cashman, 1975). Social exchange theory (Blau, 1964), the theoretical foundation of LMX, states that leaders and followers develop relationships through a series of interactions (reciprocated exchanges) (Graen & Scandura, 1987). The perceived amount or value of the exchanged commodities affects the quality of the relationship between the two parties–the greater the perceived value, the higher the LMX quality (Wayne, Shore, & Liden, 1997). Low quality relationships are characterized by exchange that is directly specified by employment contract (Liden & Maslyn, 1998), whereas high quality exchange relationships go beyond simple contractual relationships and are characterized by mutual respect, trust, social support, and liking (Dansereau et al., 1975).

A substantial body of research has been conducted to examine numerous antecedents and consequences of LMX (see such reviews as those of Cogliser, Schriesheim, Scandura, & Gardner, 2009; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997). However, limited attention has been paid to the role of LMX in a disability context. According to the World Health Organization (WHO, 2002, p. 3) disability is "an umbrella term for impairments, activity limitations and participation restrictions." The WHO's *International Classification of Functioning, Disability, and Health* (2002) incorporates components of functioning

and disability, including contextual and environmental factors, and body systems and structures. In other words, the definition assumes that environmental (e.g., social attitudes, legal and social structures) and personal (e.g., gender, age, profession) factors are major determinants of individual functioning. In the current study, we refer to disability in the workplace setting as work disability. Thus, incorporating WHO's definition and the workplace setting, we define work disability as physical or mental impairment that interferes in the person's ability to perform all or some of the duties normally included in an employee's job.

According to the Canadian Survey on Disability (CSD, 2012), around 14% of the adult population reported that they were limited in their daily activities due to a disability. The most prevalent disability types are pain, mobility, and flexibility (CSD, 2012). Musculoskeletal injury is one of the most prevalent injury types, which accounts for a large number of lost work days "making work-related musculoskeletal problems one of the most expensive health problems in modern industrial society" (Bongers, Winter, Kompier, & Hildebrandt, 1993, p. 297). In Canada, musculoskeletal injuries account for almost fifty percent of lost-time injuries (O'Brein-Pallas, Shamian, Thomson, Alksnis, Koehoorn, Kerr et al., 2004). The median employment income of employees with disabilities is 17% lower than those without disabilities (Williams, 2006). Even when hired, people with disabilities continue experiencing obstacles (Kulkarni & Lengnick-Hall, 2014), such as lower performance expectations, limited promotion (Ren, Paetzold, & Colella, 2008), negative attitudes toward accommodation requests, barriers to successful socialization, and low performance evaluations (Kulkarni & Lengnick-Hall, 2014).

Research (e.g., Hernandez, McDonald, Divilbiss, Horin, Velcoff, & Donoso, 2008) has shown that employees with disabilities are hardworking and do not

necessarily have high turnover; they can have successful careers and can serve as role models to other employees (Noonan, Gallor, Hensler-McGinnis, Fassinger, Wang, & Goodman, 2004). However, studies continue reporting that supervisors have lower performance expectations for employees with disabilities (Colella & Varma, 2001), and employers remain concerned about hiring people with disabilities (Hernandez et al., 2008). Colella and Varma (2001) argued that much more empirical research about the work experiences of employees with disabilities needs to be done in real workplace settings.

Despite laws prohibiting discrimination against individuals with disabilities, studies continue to report that people with disabilities face discrimination in the workplace (Colella & Stone, 2005), tend to have lower employment rates (Bound, & Waidmann, 2002), lower than average salaries (Koopmans, Roelen, & Groothoff, 2008), and report lower job satisfaction (Uppal, 2005). The relationship individuals with disabilities develop with their supervisors is an important aspect of work experience for people with disabilities. Graen (1976) argued that the quality of employee-supervisor relationship determines how an employee will be treated. A favorable exchange relationship is more likely when a subordinate is perceived as similar with regards to demographic attributes, attitudes, and values (Mahsud, Yukl, & Prussia, 2010). Colella and Varma (2001) argued that disability status can be perceived as a source of dissimilarity leading to lower LMX quality.

Supervisor's empathy--"the ability to recognize and understand the emotions and feelings of others" (Mahsud et al., p. 562)--is relevant to the relationship between perceived disability severity and LMX quality. Leaders with a high level of empathy are able to recognize situations when subordinates need support, encouragement, and help (Mahsud et al., 2010). "Empathy also makes it easier for the leader … to detect

any underlying feelings of injustice and resentment about assignments, rewards, and support from the leader" (Mahsud et al., 2010, p. 656). Empathy is distinct from sympathy and emotional contagion (Spreng, McKinnon, Mar, & Levine, 2009) in that it leads to behavioral responses (Mahsud et al., 2010; Leiberg & Anders, 2006). Thus, leaders with high levels of empathy not only "feel sorry" (as in a case of sympathy), but also try to undertake some corrective actions (e.g., provide social support). Therefore, we argue that the adverse effect of low performance expectations may be mitigated by leader empathy, resulting in higher LMX quality.

Research has shown that high quality LMX is associated with numerous positive job outcomes, such as job performance, satisfaction with the supervisor, overall job satisfaction, commitment, role conflict, role clarity, and turnover intentions (see reviews such as Bhal & Ansari, 1996; Bhal & Ansari, 2000; Cogliser et al., 2009; Dulebohn et al., 2012; Gerstner & Day, 1997; Martin, Epitropaki, Thomas, & Topakas, A., 2010). However, we are aware of no research that has examined the importance of LMX quality for outcomes such as resilience, presenteeism, and job accommodation.

The purpose of this thesis is therefore (a) to examine the relationship between perceived disability severity and LMX quality, (b) to determine if this relationship is moderated by leader empathy, and (c) to investigate the extent to which high quality LMX facilitates (mediates) the relationship between perceived disability and employee outcomes (resilience, job accommodation, presenteeism, job satisfaction, and performance).

Two separate studies are conducted to shed light on the differences and similarities between leader and member perspectives. In other words, the two studies show how the nature of relationships between LMX and its correlates change or

remain the same depending on the perspective. Collecting data on two perspectives also allows examination of outcomes perceived by either the leader (e.g., employee performance) or the member (e.g., job satisfaction). This is important because, as highlighted by Sin, Nahrgang, and Morgeson (2009), there is a relatively low level of agreement between leaders and members in their assessment of supervisor-subordinate relationships.

From the theoretical perspective, this research has several important contributions. First, the proposed model extends disability research by considering the role of LMX quality in the mediation of resilience, job accommodation, job satisfaction, performance, and presenteeism. Second, two separate studies are conducted reflecting employee and supervisor perspectives. Third, although LMX theory provides strong theoretical support for the relationships between LMX quality and resilience, job accommodation, and presenteeism, to our knowledge, there are no empirical studies on the abovementioned outcomes in the LMX area. Therefore, this study extends LMX research by examining the proposed outcomes. Finally, the study investigates the moderating role of leader empathy on the relationship between perceived disability severity and LMX quality.

From the practical perspective, this research highlights the role supervisor-subordinate relationship plays in facilitating important outcomes for employees with disabilities. Up to this point, most research on LMX has been conducted in organizational settings without considering the work experience for employees with disabilities. In addition, this study demonstrates the moderating role of empathy in the relationship between perceived disability severity and LMX quality. In other words, we examine how leader empathy can serve as a source of social support for employees

with disabilities, thereby buffering against the negative effects of perceived disability severity.

The thesis is divided into six chapters. In the following Chapter 2, I survey the past literature on the variables of interest that include LMX, perceived disability severity, empathy, and the proposed outcomes. I also present the theoretical framework and a set of hypotheses postulated for the objectives of the study. Chapter 3 presents the methodology used to examine the research model. Chapter 4 provides research findings from the perspective of the employee, and Chapter 5 presents findings from the perspective of the supervisor. Finally, Chapter 6 interprets the findings of the two studies and discusses theoretical and practical research implications, potential limitations, and opportunities for future studies.

Chapter 2: Literature Review and Hypotheses Development

This chapter consists of five sections that explore the role of LMX quality and empathy in the relationship between perceived disability severity and employee outcomes. The first section examines how perceived disability severity might affect LMX quality. Section two outlines the relationships between LMX and five outcomes: job accommodation, presenteeism, resilience, performance, and job satisfaction. The next two sections explore the moderating role of empathy and mediating role of LMX quality. Finally, section five presents the moderated mediation model. A research model where leader empathy buffers the effects of perceived disability severity on the proposed outcomes through enhanced supervisor-subordinate relationships is presented in Figure 2.1

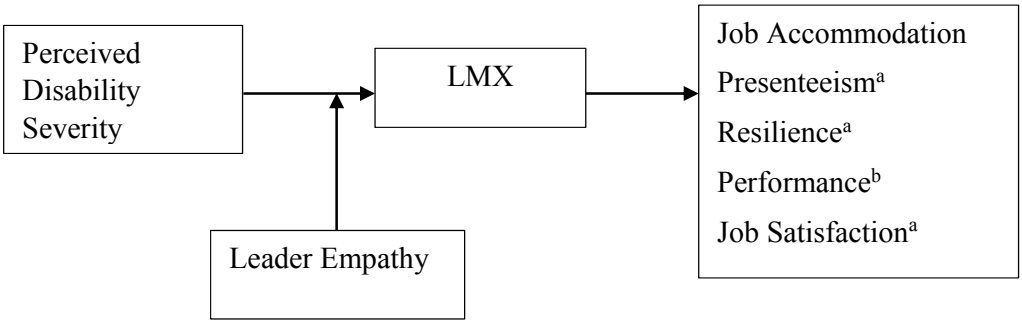

Figure 2.1. Hypothesized relationships among study variables. [a] From the employee perspective only. [b] From the supervisor perspective only.

All hypothesized relationships are tested from both perspectives, rather than testing differential hypotheses for employee and supervisor perspectives. This is justified for two reasons. First, a single theoretical basis—social exchange theory (Blau, 1964)—is utilized to build hypotheses for both perspectives. Second, there is not enough existing research that supports differentiating employee and supervisor perspectives. The majority of studies on leader-member relationships have been conducted only from the follower perspective (Dulebohn et al., 2012).

Subordinate Disability and LMX

As noted previously, LMX is rooted in social exchange theory (Blau, 1964) and is viewed as the exchange relationship that takes place between leaders and followers (Cropanzano & Mitchell, 2005). According to social exchange theory, "individuals engage in relationships based on a subjective cost-benefit analysis" (Major & Morganson, 2011, p. 130).

Dienesch and Liden (1986) proposed three dimensions of LMX that consist of: (a) contribution, defined as "perception of the amount, direction, and quality of work-oriented activity each member puts forth toward the mutual goals (explicit or implicit) of the dyad" (p. 624), (b) loyalty, defined as "the expression of public support for the goals and the personal character of the other member of the LMX dyad" (p. 625) and (c) affect, defined as "the mutual affection members of the dyad have for each other based primarily on interpersonal attraction rather than work or professional values" (p. 625). More recently, Liden and Maslyn (1998) added professional respect as the fourth currency (i.e., dimension) of LMX. Respect is defined as the "perception of the extent to which each follower of the dyad has built a reputation, within and/or outside the organization, of excelling at his/her line of work" (p. 50).

Leader expectations about follower work contributions are important to LMX quality. However, "many people have a biased view of the capacities of employees with disabilities" (Vornholt, Uitdewilligen, & Nijhuis, 2013 p. 469). Negative biases, including low job performance expectations were "found to be prevalent under conditions in which the performance of the employee with disability had direct consequences for the rater" (p. 470). In other words, the supervisor of the work disabled subordinate might feel that the disability condition poses a threat to a team, department, or the supervisor's own performance. Given that expectations about

future performance are a better predictor of LMX quality than actual job performance (Liden, Wayne, & Stilwell, 1993), perceived disability severity might have a negative effect on LMX quality. Braddock and Bachelder (1994) noted that employers often have unfounded concerns about employees with disabilities, including performance level and high costs of job accommodation. Taking into account the similarity attraction paradigm (Byrne, 1971), Colella and Varma (2001) claimed that "nondisabled supervisors are likely to perceive subordinates with disabilities as dissimilar to themselves and so experience less positive affect" (p. 305). Mahsud et al. (2009) argued that "a favorable exchange relationship is more likely when … the subordinate's demographic attributes are similar to those of the leader" (p. 562). Dissimilarity between individuals decreases their liking for each other and, as a result, affects interactions and behaviors, which in turn leads to lower LMX quality (Colella & Varma, 2001; Dwertmann & Boehm, 2016). Dwertmann and Boehm (2016) examined the effects of incongruence in disability status between supervisors and subordinates on LMX quality. They found that incongruence in disability status in general was related to lower LMX quality and lower performance. The lowest LMX quality was found in dyads in which the supervisor had a disability and the subordinate did not). Thus, leader perception of subordinate work disability severity is likely to result in low LMX ratings from the supervisor perspective. Despite the fact that employees with disabilities perform as well, or even better than their non-disabled coworkers (Greenwood & Johnson, 1987), non-disabled co-workers maintain a high degree of social distance from employees with disabilities; they believe that individuals with disabilities are responsible for a higher workload, which in turn leads to more negative reactions and attitudes toward employees with disabilities (Scherbaum, Scherbaum, & Popovich, 2005).

LMX relationships form as a result of a reciprocation process (Liden, Sparrowe, & Wayne, 1997) and role-taking or role-making (Graen, 1976). Role-taking is the process of interaction without negotiation; it implies acceptance of formally defined roles, and it is generally characterized by low LMX quality (Graen, & Uhl-Bein, 1991). On the other hand, role-making is a dynamic process which is characterized by leaders and members actively negotiating their roles (Graen, 1976). The supervisor or the subordinate goes beyond formally defined roles to see whether the new roles are accepted or not. In general, leaders are perceived as initiators of the reciprocity process, and members respond to favorable treatment by feeling obliged to work harder to benefit the leader and reciprocate the favorable treatment (Liden et al., 1997). I argue that, in a case of high perceived disability severity, a leader is less willing to initiate the reciprocation process with a subordinate, which in turn reduces role-making opportunities for the subordinate leading to poor LMX quality.

In the current work, the relationship between perceived disability severity and LMX quality is studied from both supervisors' and employees' perspectives. I suggest that a supervisor's perception of employee work disability severity negatively affects LMX quality. High perceived disability severity results in leaders' low expectations regarding employees' contributions and performance ratings leading to low LMX quality. From the employee's perspective, a high level of perceived disability affects perception of possible contribution and reduced role-making opportunities, which lead to low LMX quality. Consequently, we hypothesize:

H1: The level of perceived disability is associated with LMX quality, in that high perceived disability severity leads to lower LMX quality.

LMX and Work Outcomes

Generally, social exchange theory (Blau, 1964) is used to justify the positive effects of high quality LMX relationships (Rockstuhl, Dulebohn, Ang, & Shore, 2012). Golden and Veiga (2008) claimed that leaders tend to provide more social and work support, and valuable information in high quality LMX relationships, whereas followers offer such valuable resources as extra effort and dedication to the leaders' goals. In high quality LMX relationships, leaders provide assistance with problems at work, emotional support, and formal and informal rewards (Gerstner & Day, 1997).

LMX and job satisfaction. The quality of supervisor-subordinate relationships is strongly and positively associated with employee job satisfaction (Dulebohn et al., 2012; Golden & Veiga, 2008; Schriesheim, Neider, Scandura, & Tepper, 1992). Job satisfaction is defined as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1304). There are several longitudinal studies that investigated LMX as a predictor of job satisfaction (e.g., Epitropaki & Martin, 2005; Vecchio, Griffeth, & Hom, 1986). For example, Epitropaki and Martin (2005) studied 436 British employees and found that the quality of supervisor-subordinate relationships was strongly associated with employees' job satisfaction (r = .56). There are several explanations for the positive relationships between LMX and job satisfaction. First, employees in high LMX relationships receive more privileges and resources and have positive socio-emotional experiences (Epitropaki & Martin, 2005), which result in a high level of job satisfaction. Second, in-group members (high LMX quality) compare their status and privileges with out-group members (low LMX quality), which consequently increase the job satisfaction of in-group members (Bhal, Gulati, & Ansari, 2009; Volmer,

Neissen, Spurk, Linz, & Abele, 2011). Therefore, we expect that employees in high quality LMX relationships will experience higher levels of job satisfaction.

LMX and employee performance. The relationships between LMX and both subjective and objective performance ratings have been demonstrated in numerous studies (e.g., Ansari, Hung, & Aafaqi, 2007; Bhal & Ansari, 2007; Dansereau et al., 1975; Duarte, Goodson, & Klich, 1994; Dunegan, Dunchon, & Uhl-Bein,1992; Graen, Novak, & Sommerkamp, 1982). Cleveland and Murphy (1992) stated that in-group *vs.* out-group status affects how subordinates are rated and treated during a performance appraisal process. The nature of interpersonal relationships is more strongly related to performance ratings than objective performance (Alexander & Wilkins, 1982). Liking for a subordinate, which is a part of an affective component of leader-member exchange, has been found to result in differential ratings (Cardy & Dobbins, 1986). Consequently, we hypothesize that LMX quality is positively associated with performance rating.

LMX and presenteeism. Presenteeism is defined as being at work despite health problems, which results in decreased job performance (Schultz & Edington, 2007). Presenteeism occurs when employees present at work despite an illness or injury that should keep them away from work (Aronsson, Gustafsson, & Dallner, 2000). Hemp (2004) argued that presenteeism "appears to be [a] much costlier problem than its productivity-reducing counterpart, absenteeism" (p. 49). This phenomenon has important implications for employee well-being and employing organizations (Johns, 2011). Roy et al. (2011) argued that musculoskeletal disorders often lead to work disability in the form of presenteeism. Presenteeism affects both quantity and quality of work (Hemp, 2004), and could lead to higher risk of re-injury. Errico, Viotti, Baratti, Mottura, Barocelli et al. (2013) claimed that presenteeism

among employees with musculoskeletal disorders can increase symptom resistance and reduce the probability of recovering. Presenteeism can result in the exacerbation of existing medical conditions, irritability, fatigue, poor concentration, decreased motivation, and work-family conflict (Hemp, 2004; Johns, 2011). Studies have suggested that perceived pressures from supervisors or coworkers (Grinyer & Singleton, 2000), fear of disciplinary action or risking promotion opportunities (McKevitt, Morgan, Dundas, & Holland, 1998), job insecurity (MacGregor, Cunningham, & Caverley, 2008), and perceived ease of replacement (Johns, 2011) may result in presenteeism. Caverley, Cunningham, and MacGregor (2007) examined the role of supervisor support among other factors in presenteeism. The results suggested that increased presenteeism was associated with decreased supervisor support, job security, and job satisfaction.

LMX and job accommodation. Job accommodation refers to the development and implementation of a modified work plan for employees with disabilities (Shaw et al., 2014). Shaw et al. noted that job accommodation prevents sickness absence and reduces disability costs. Employers who accommodate individuals with disabilities benefit from the ability to retain quality employees, increased workforce diversity, and avoid costs associated with hiring new employees (Vornholt et al., 2013). Despite the relatively low costs of job accommodations (Braddock & Bachelder, 1994), "studies have provided a recurring theme that job modifications are often poorly planned or executed in the workplace" (Shaw et al., 2014, p. 756).

Shaw et al. noted the importance of supervisory experience, knowledge, and support to improve job accommodation for employees with disabilities. Supervisors play an important role in the physical and social aspects of work accommodation; they

are “uniquely situated to manage the day-to-day social relations and physical conditions in the work environment” (MacEachen, Clarke, Franche, & Irvin, 2006, p. 265). When asking for accommodation, employees consider the likelihood of supervisory compliance. Perceived low likelihood will result in withheld requests for accommodation even when accommodation costs are minimal (Baldridge & Veiga, 2006). Baldridge and Veiga (2006) argued that under-accommodation is a major barrier to equal employment opportunities. Given that in high quality LMX relationships leaders tend to provide assistance with problems at work, emotional support, formal and informal rewards (Gerstner & Day, 1997), and social support (Golden & Veiga, 2008), we expect that supervisor-subordinate relationships are positively associated with job accommodation for employees with disabilities. Therefore, we expect that high quality LMX will result in more frequent job accommodation.

LMX and resilience. Resilience is an ability to adapt to the changing demands of stressful experiences (Lazarus, 1993). Individuals who demonstrate higher resilience are more likely to successfully adapt to a disruptive event (e.g., traumatic injury, loss of job, and death of spouse) (White, Driver, & Warren, 2010). There are two points of view that define resilience. Block and Kremen (1996) defined resilience as a stable personal trait. However, the view of resilience as a stable and fixed personality trait does not account for the idea that “adaptation is the whole interaction between individuals and environment around them” (Lee, Nam, Kim, Kim, Lee, & Lee, 2013, p. 269). Thus, resilience is ‘‘a dynamic process where individuals display positive adaptation despite experiences of significant adversity or trauma’’ (Luthar & Cicchetti, 2000, p. 858). Environmental and contextual factors play important roles in shaping personal resilience (Roberts & Masten, 2004). Lee et al. found a significant

positive relationship between resilience and a number of protective factors. Protective factors refer to the characteristics that enhance adaptation, for instance, social support, life satisfaction, and optimism. Resilience has been shown to play a protective role in patients who experience chronic pain (Zautra, Fasman, Parrish, & Davis, 2007). It correlates with higher levels of pain acceptance and coping (Ramırez-Maestre, Esteve, & Lopez-Martınez, 2012), lower levels of pain intensity (Ong, Zautra, & Reid, 2010), and lower emotional distress (Ramırez-Maestre et al., 2012). We anticipate that there is a positive relationship between LMX quality and the resilience of employees with disabilities. Consequently, we argue that social support provided in high-quality LMX relationships increases the level of the subordinate's resilience.

According to LMX theory, extended resources and strong social support are available to a subordinate in a high-quality LMX relationship (Graen & Uhl-Bein, 1995). When leaders and followers share positive perceptions of their LMX quality, both parties benefit from balanced high quality relationships (Cogliser et al., 2009). A supervisor is the representative of the work organization and the authority who is involved in an employee's daily work life. Thus high-quality supervisor-subordinate relationships, which are characterized by high levels of social support, ought to positively correlate with the employee's resilience and job accommodation, and negatively associate with presenteeism. We expect a negative relationship between presenteeism and LMX quality. However, it might be possible that the presenteeism level may increase for employees in the highest quality LMX relationships representing a curvilinear rather than linear relationship. The possible explanation is that employees in high quality LMX relationships may experience increased feelings of obligation and greater expectations (Graen & Uhl-Bein, 1991), which will lead to a reluctance to take sick leaves. Harris and Kacmar (2006) argued that "the additional

requirements that subordinates have in high-quality LMX relationships are likely to outweigh the increased social support" (p. 66).

H2: LMX quality is positively associated with (a) job accommodation, (b) resilience, (c) job satisfaction, (d) performance, and is negatively associated with (e) presenteeism.

The Moderating Role of Empathy

Social exchange theory (Blau, 1964) provides a foundation for explaining how supervisor-subordinate exchange relationships develop over time. Exchanged resources and expectations concerning exchange processes play a crucial role in the development of LMX relationships (Dienesch & Liden, 1986; Wilson, Sin, & Colon, 2010). The severity of an employee's work disability acts as a constraint on the ability of individuals to engage in in-kind exchanges. We have hypothesized that the extent of perceived disability is negatively associated with LMX quality. However, perceived disability severity may not always lead to poor LMX quality. We argue that a leader characteristic such as empathy is relevant for the development of favorable exchange relationships between subordinates with disabilities and their supervisors. The supervisor's response to subordinate disability varies with the supervisor's ability to empathize.

Some researchers (e.g., Leiberg & Anders, 2006) argue that empathy is a relatively stable personality trait, which varies between individuals, whereas other researchers define empathy as a situation-specific cognitive-affective state (Duan & Hill, 1996). In the current study, we will incorporate both definitions of empathy, arguing that a certain level of empathy can be an innate personal trait and/or a product of development and situational factors (e.g., subordinate's disability). In other words,

we assume that empathy exists as a stable trait and can be activated by a particular circumstance (e.g., disability status of the employee).

Leiberg and Anders (2006) argued that a high level of empathy facilitates an appropriate reaction to other people's emotions and feelings. Empathy is a distinct construct from sympathy, emotional contagion, and perspective taking (Spreng et al., 2009), in that empathy reflects a willingness to understand and react (Spreng et al., 2009). There is little agreement among researchers on the definition of empathy (Duan & Hill, 1996). Researchers who argue that empathy is a trait (e.g., Leiberg & Anders, 2006; Mahsud et al., 2009) have underlying assumptions that some individuals are more empathic than others, either by nature or by development. Leiberg and Anders (2006) stated that "the ability to empathize varies between individuals and is considered as a stable personality trait: some people are generally more successful in empathizing than others" (p. 419). Researchers who consider empathy as a situation specific cognitive-affective state (e.g., Duan & Hill, 1996) define empathy as "responding 'vicariously' to a stimulus or a stimulus person" (Duan & Hill, 1996, p. 262). Although there is little agreement among researchers on the precise definition of empathy, "leading theorists tend to agree that it [empathy] consists of both the ability to share the emotional experience of another and the ability to understand (or mentalize) this experience" (Baldner & McGinley, 2014, p. 727). These two elements refer to affective and cognitive systems of empathy, respectively. Affective trait refers to the capacity to experience the emotions of another person, while cognitive ability is the capacity to comprehend the emotions of another person (Jolliffe & Farrington, 2006).

Given these concepts of empathy, we expect that supervisors with high levels of empathy are more willing to understand and act on emotions and feelings of

subordinates with disabilities resulting in more social support, which leads to higher LMX quality. Thus the adverse effect of perceived disability is mitigated in the case of high levels of supervisor empathy. A leader with a high empathy level is able to recognize subordinate contributions, may provide psychological support, and is willing to develop subordinate skills (Mahsud et al., 2009). We argue that such relations-oriented behavior might help subordinates with disabilities to reevaluate their capacities regarding job performance and resources available for exchange. This in turn results in more frequent reciprocation interactions, which will mitigate the negative impact of perceived disability severity on supervisor-subordinate relationships.

Accordingly, we expect the encouragement and social support from supervisors, who have a high level of empathy, may help counteract the adverse effect of perceived disability severity on supervisor-subordinate relationships.

H3: Leader empathy moderates the relationship between supervisors' perceived disability severity and LMX quality, such that higher perceived disability has a stronger negative effect on LMX for employees whose supervisors are lower on empathy as compared to those whose supervisors are higher on empathy.

The Mediating Role of LMX

Prior research has suggested that LMX may operate as a mediator through which antecedents affect consequences (Dulebohn et al., 2012). Relationships between supervisors and subordinates are essential in determining work experiences and work consequences of employees (Brower, Schoorman, & Tan, 2000). Dulebohn et al. (2012) demonstrated that supervisor-subordinate relationships mediate much of the variance between predictor and criterion variables. "These results [the results of meta-

analytic review] indicate that it is quality of the relationship that determines key outcomes, not the follower or leader behaviors or perceptions per se" (Dulebohn et al., 2012, p. 1739). Similarly, Gewurtz and Kirsh (2009) conducted a meta-analytic review of the work experience of employees with disabilities. They argued that "almost all of the [reviewed] articles referred to the importance of relationships at work in the experiences of persons with disabilities" (p. 39). Social support from supervisors was found to be critical for job accommodation and job maintenance for employees with disabilities.

Past research (e.g., Grinyer & Singleton, 2000; Lee et al., 2013; Shaw et al., 2014) has shown the importance of social support for employees' outcomes such as resilience, job accommodation, presenteeism, performance, and job satisfaction. According to LMX theory, expanded resources and strong social support are available to employees in high quality LMX (Graen & Uhl-Bein, 1995). Thus, good supervisor-subordinate relationships can result in higher levels of resilience, job accommodation, job satisfaction, performance, and decreased presenteeism for employees with disabilities. The mediating role of LMX in the relationship between perceived disability severity and employee outcomes is based on the notion that supervisor-subordinate relationships largely define work experience and work outcomes for employees (Dulebohn et al., 2012). The support provided in high quality LMX can help employees with disabilities to be more resilient, have higher levels of job satisfaction, job performance, better job accommodation, and be engaged in less presenteeism.

Given that we have hypothesized the effects of perceived disability on LMX quality (Hypothesis 1) and the relationships between LMX and outcomes (Hypothesis 2), we expect that LMX might explain the relationship between the perceived

disability severity and resilience, job accommodation, job satisfaction, performance, and presenteeism. Thus, we hypothesize the intervening role of LMX quality. This mediating role highlights that supervisor-subordinate relationships are important because high LMX quality can facilitate job accommodation, resilience, job satisfaction, performance, and decreased presenteeism for employees with disabilities.

H4: LMX mediates the relationship between perceived disability severity and (a) resilience, (b) job accommodation, (c) presenteeism, (d) job satisfaction, and (e) performance; such that the direct effect of perceived disability becomes non-significant after LMX quality is considered.

Moderated Mediation

Finally, we argue that LMX does not only mediate the relationship between the extent of perceived disability and the outcomes, but also mediates the interactive effect of perceived disability and leader empathy on resilience, job accommodation, and presenteeism.

Based on the tenets of LMX theory, we argue that high quality LMX is characterized by social support, mutual trust, and liking, which justify a variety of positive outcomes (Graen & Uhl-Bein, 1995). Different levels of leader empathy are related to how supervisors respond to the subordinates' disabilities, moderating the relationships between perceived disability and LMX quality. The levels of LMX quality are related to employees' job accommodation, resilience, job satisfaction, performance rating, and presenteeism. In summary, we expect that the indirect effect of perceived disability severity on the outcomes, through LMX quality, will be contingent on leader empathy. Following our Hypotheses 2, 3 and 4, we contend that when leaders have low levels of empathy, the adverse effect of perceived disability severity on supervisor-subordinate relationships and ultimately on the outcomes is

stronger. In contrast, when leaders have high levels of empathy, the adverse effect of the perceived disability severity on LMX and ultimately on the outcomes is weaker. Accordingly, we posit the following conditional indirect effects of perceived disability severity and leader empathy, through supervisor-subordinate relationships, on resilience, job accommodation, job satisfaction, performance, and presenteeism. Specifically, we predict that among subordinates whose leaders are low in empathy, there is a negative indirect effect of perceived disability severity on job accommodation, job satisfaction, performance, and resilience, and there is a positive indirect effect on presenteeism, through LMX quality. Thus, we offer the following hypotheses:

H5: Leader empathy moderates the indirect effect of perceived disability severity on (a) presenteeism, (b) job accommodation, (c) job satisfaction, (d) performance, and (e) resilience through LMX quality.

H5a: When a leader has low empathy, there is a negative indirect effect of perceived disability severity through LMX quality on (a) resilience, (b) job satisfaction, (c) performance, and (d) job accommodation, and (e) there is a positive indirect effect of perceived disability severity on presenteeism.

H5b: When a leader has high empathy, the negative indirect effect of perceived disability through LMX quality on (a) job accommodation, (b) job satisfaction, (c) performance, and (d) resilience is no longer significant or weakens; (e) the positive indirect effect of perceived disability severity through LMX quality on presenteeism is no longer significant or weakens.

To summarize, the research model with hypothesized relationships among variables is depicted in Figure 2.2. I offer a research model where leader empathy buffers the effects of perceived disability severity on the proposed outcomes through

enhanced supervisor-subordinate relationships. Leader empathy helps to mitigate the negative effect of perceived disability severity on LMX relationships, which in turn facilitates positive outcomes and reduces negative outcomes for employees with disabilities. The research model is based on the tenets of social exchange theory (Blau, 1964) that provide strong theoretical foundation for the importance of social support and trust provided in high quality relationships for all considered constructs.

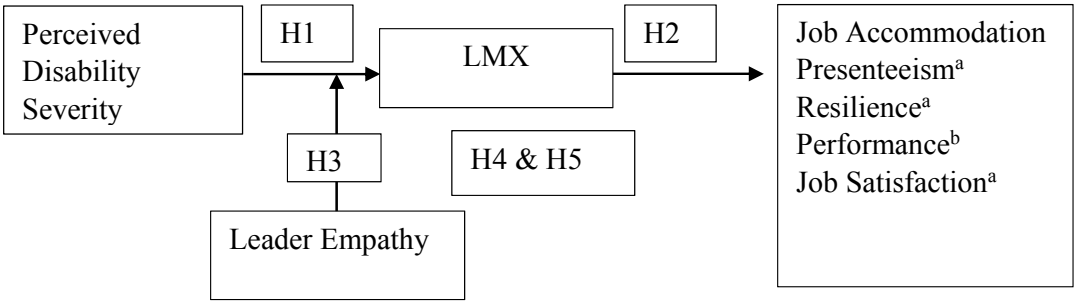

Figure 2.2. Hypothesized model. [a] From the employee perspective only; [b] From the supervisor perspective only.

Chapter 3: Methodology

Overview

Two cross-sectional independent studies were conducted. The data were collected from two perspectives (subordinates and employees) by means of questionnaire surveys. Study 1 represents data from employees with musculoskeletal injuries. The following eligibility criteria were set: (1) employee has experienced musculoskeletal injury sometime in the past two years; (2) employee has returned to work since the injury and is currently employed; and (3) employee took at least one day off because of injury. Study 2 provides data from supervisors who have supervised employees with musculoskeletal injuries in the past two years. For both studies, participants were recruited through Amazon.com's Mechanical Turk. Mechanical Turk is a crowdsourcing online platform that allows recruitment of a diverse subject pool of working adults in a short period of time (Mason & Suri, 2012). Research has shown that Mechanical Turk provides representative samples of the U.S. population (Ross, Irani, Silberman, Zaldivar, & Tomlinson, 2010). "U.S. workers on Mechanical Turk are arguably closer to the U.S. population as a whole than subjects recruited from traditional university subject pools." (Paolacci, Chandler, & Ipeirotis, 2010, p.3). Amazon claimed Mechanical Turk had hundreds of thousands of workers representing more than ten thousands employers (Pontin, 2007).

For both studies, the employed measures were similar. We employed the same scales for perceived disability severity, LMX, and job accommodation. Some minor changes were made to reflect subordinate's/supervisor's perspective (see Appendices A3 and A4). Presenteeism, resilience, and job satisfaction were measured only from the employee perspective, while supervisors rated employees' performance. Chosen

measures have been widely used in past research, and they have been found to document sound psychometric properties.

Participants and Procedure: Employee Perspective (Study 1)

A survey to capture the employee perspective was created on the Qualtrics platform. A task with detailed instructions was published on Mechanical Turk. The sample consisted of employees who are currently back at work, but who have experienced musculoskeletal injury resulting in a minimum of one day lost time, within the past two years. In addition, several screening questions regarding employment status and injury were included at the beginning of the survey. Participants were asked whether they had returned to work since injury. We also asked participants to specify what type of musculoskeletal injury they had (open-ended question) and to describe their injuries (open-ended question). Participants who had not returned to work since injury or who failed to describe an injury were excluded from the analysis.

Measures (Study 1)

The survey questionnaire was administrated electronically using Qualtrics (www.qualtrics.com). A brief description of measures used in the employee survey is shown in Table 3.1. Additional detail and rationale for the selection of the measures is provided below.

Perceived disability. Disability has often been examined as a dichotomous (Colella & Varma, 2001; Fine & Asch, 1988) or a categorical (Capella, 2003; Fulton & Sabornie, 1994) variable. A dichotomous variable refers to whether a person is disabled or not, and does not reflect the severity of the disability. Referring to disability as a categorical variable may help to identify different types of disability

(e.g., mental or physical). However, Jette and Badley (2000) argued that disability is not an all-or-nothing phenomenon. “In reality, disability (in particular, roles or activities) is usually encountered in terms of degree of difficulty, limitation, or dependence, ranging from slight to severe” (p. 21). The current study measures perceived disability severity on a continuum employing different dimensions of illness perception.

We used the Revised Illness Perception Questionnaire (IPQ-R) to measure perceived disability severity (Moss-Morris, Weinman, Petrie, Horne, Cameron, & Buick, 2002). The IPQ-R has been validated for a wide range of medical conditions including arthritis, acute and chronic pain. It has shown good internal consistency (Cronbach’s alpha = .70 to .89), discriminant validity, predictive validity, and test-retest reliability (Coutu et al., 2008). We employed five dimensions of the scale: (a) acute/chronic timeline, (b) consequences, (c) personal control, (d) treatment control, and (e) cyclical timeline. Respondents were asked to indicate on a 7-point scale (1 = *strongly disagree;* 7 = *strongly agree)*, the extent of their disagreement/agreement with each statement. Sample items are: “My injury is/was likely to be permanent rather than temporary” (timeline acute/chronic); “My injury is/was very unpredictable” (timeline cyclical); “My injury is/was a serious condition” (consequences); “The course of my injury depends/depended on me” (personal control); and “My treatment can/could control my injury” (treatment control).

Leader-member exchange. We employed Liden and Maslyn’s (1998) LMX-MDM scale to assess the quality of employee-supervisor relationships. The scale includes 12 items assessing four dimensions: (a) affect, (b) loyalty, (c) professional respect, and (d) contribution (Dienesch & Liden, 1986; Liden & Maslyn, 1998). Affect refers to the mutual affection employee and supervisor have for each other.

Affect is based on interpersonal attraction and liking rather than work or professional values (Dienesch & Liden, 1986). The loyalty dimension reflects the extent to which both supervisor and employee publicly support each other's actions (Dienesch & Liden, 1986). Contribution refers to the perception of the direction, amount, and quality of work-related activities employees and supervisors put forth toward mutual goals (Dienesch & Liden, 1986). Finally, the professional respect dimension refers to the mutual respect an employee and a supervisor have for each other's professional qualities (Liden & Maslyn, 1998). All four dimensions have demonstrated adequate internal consistency: affect (α = .90), loyalty (α = .78), professional respect (α = .92), and contribution (α = .60) (Liden & Maslyn, 1998).

Respondents were asked to indicate on a 7-point scale (1 = *strongly disagree;* 7 = *strongly agree)*, the extent of their disagreement/agreement with each statement. Sample items are: "I like my supervisor very much as a person" (affect); "My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question" (loyalty); "I am willing to apply extra efforts, beyond those normally required, to meet my supervisor's work goals" (contribution); and "I am impressed with my supervisor's knowledge of his / her job" (professional respect).

Leader empathy. To measure employee perception of leader empathy, we employed Wong and Law's (2002) scale. The scale measures "peoples' ability to perceive and understand the emotions of those people around them" (Wong & Law, 2002). The scale has been found to demonstrate high convergent, discriminant, instrumental validity, and internal coefficient with a Cronbach's alpha of .85 (Wong & Law, 2002). We argued that empathy could be both a trait and a state. The employed scale measures subordinate's perception of leader's ability to emphasize reflecting empathy as a trait. The scale has four items and responses were obtained on a 5-point

scale (1 = *strongly disagree;* 5 = *strongly agree)*, indicating the extent of their disagreement/agreement with each statement. We slightly modified the wording to reflect employee's perception of supervisor empathy. A sample item is "My supervisor is sensitive to the feelings and emotions of others."

Presenteeism. We measured presenteeism using the Stanford Presenteeism Scale (SPS-6) (Koopman et al., 2002). SPS-6 evaluates the effect employees' health has on the ability to perform their job tasks. The short version of the scale has six items. The scale has demonstrated high internal consistency and concurrent and discriminant validity (Koopman et al., 2002). The presenteeism scale has two dimensions: (a) completing work and (b) avoiding distractions. Avoiding distractions refers to the extent to which an employee can focus on work processes, and completing work reflects the extent to which an employee is able to work efficiently despite his or her injury (Koopman et al., 2002). Koopman et al. (2002) reported Cronbach's alpha for the scale was .80. We asked the respondents to indicate on a 7-point scale (1 = *strongly disagree;* 7 = *strongly agree)* the extent of their disagreement/agreement with each statement. Examples of scale items are: "Despite having my injury, I was able to finish hard tasks in my work" (completing work) and "Because of my injury, the stresses of my job were much harder to handle" (avoiding distractions).

Job accommodation. We used the newly developed Job Accommodation Scale (JAS) to measure job accommodation (Shaw et al., 2014). The JAS was developed for supervisors whose subordinates have low back pain injuries. The scale contains 21 items measuring five types of accommodation: (a) modifying physical workload, (b) modifying work environment, (c) modifying work schedule, (d) finding alternate duties, and (e) arranging for work assistance. The JAS has demonstrated

acceptable internal consistency (Cronbach's alpha ranged from .53 to .85) and construct validity (Shaw et al., 2014). The original JAS measures job accommodation on a 4-point scale (1 = *very unlikely*; 4 = *very likely*). However, in the context of this study, some employers might have already offered some types of job accommodation. Thus we measured job accommodation on a 7-point scale (1 = *very unlikely;* 7 = *has already been offered*). We modified the items to reflect responses from employees rather than supervisors, such as: "My current immediate supervisor has or is likely to offer job modifications to help me avoid lifting heavy objects" (modified physical workload); "My current immediate supervisor has or is likely to offer job modifications by providing a more comfortable place to sit" (modified work environment); "My current immediate supervisor has or is likely to offer job modifications so I work shorter days" (modified work schedule); "My current immediate supervisor has or is likely to offer job modifications by moving me to a different site or location" (alternate duties); and "My current immediate supervisor has or is likely to offer job modifications by arranging for others to help" (arranged work assistance).

Resilience. We employed the Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003) to measure employees' resilience. The scale is comprised of 25 items, each rated on a 7-point scale (1 = *strongly disagree;* 7 = *strongly agree*). The CD-RISC scale incorporates five dimensions: (a) personal competence, (b) trust in one's instincts, (c) positive acceptance to change, (d) control, and (e) spiritual influences. The scale has demonstrated adequate psychometric properties, including test-retest reliability, convergent and discriminant validity (Connor & Davidson, 2003). Connor and Davidson (2003) reported Cronbach's alpha was .89. Examples of CD-RISC items include, "I can deal with whatever comes" (positive acceptance to

change); “I give my best effort no matter what” (personal competence); “Under pressure, I focus and think clearly” (trust in one’s instinct); “I know where to turn for help” (control); and “Sometimes fate or God can help” (spiritual influences).

Job satisfaction. Employee overall job satisfaction was assessed with two items taken from the Index of Organization Reactions (Dunham & Smith, 1979). The instrument has demonstrated adequate internal coefficient ($\alpha = .76$) and convergent and discriminant validity. Included items are: “All in all, I am satisfied with my job” and “Compared to most jobs, mine is a pretty good one.”

Control variables. Several variables have the potential to influence the focal variables and relationships presented in these studies. Worker tenure with the supervisor, age (Sin et al., 2009), gender (Bauer & Green, 1996), education, and time with supervisor (Dienesch & Liden, 1986) have been identified as variables that could have significant effect on LMX relationships. Type of job has been found to correlate with presenteeism (Koopman et al., 2002). Gender and job type have the potential to influence job accommodation (Shaw et al., 2014). Gender could correlate with empathy and resilience (Connor & Davidson, 2003; Hojat, Gonnella, Nasca, Mangione, Vergare, & Magee, 2002) as well. Colella and Varma (2001) argued that age and gender could confound the relationship between perceived disability severity and LMX quality (Colella & Varma, 2001). In summary, we measured relevant demographic variables, such as age, gender, educational level, job tenure, job type, tenure with supervisor, and frequency of interactions with the current immediate supervisor.

Podsakoff, MacKenzie, and Podsakoff (2003) argued that common method variance (CMV) can threaten the validity of the conclusions about the relationships between variables causing both random and systematic measurement errors. CMV

occurs when two or more constructs are measured with the same method (Podsakoff, MacKenzie, Lee, & Podsakoff, 2012). "The major concern with measuring different constructs with the same method is the danger that at least some of the observed covariation between them [variables] may be due to the fact that they share the same method of measurement" (Podsakoff et al., 2012, p. 540). CMV can inflate or deflate the relationships between variables leading to increased Type I and Type II errors. Social desirability and positive/negative affectivity are the potential sources of CMV (Podsakoff et al., 2012). "Social desirability reflects the tendency on behalf of the subjects to deny socially undesirable traits and to claim socially desirable ones" (Nederhof, 1985, p. 264). Negative/positive affectivity "refers to the propensity of respondents to view themselves and the world around them in generally negative terms (negative affectivity) or the propensity of respondents to view themselves and the world around them in generally positive terms (positive affectivity)" (Podsakoff et al., 2003, p. 882). We included social desirability (Crowne & Marlowe, 1960) and positive and negative affect (PANAS) (Thompson, 2007) scales as control variables for the CMV. The social desirability (SD) scale is comprised of six items, each rated on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). The scale has demonstrated acceptable level of internal consistency with Cronbach's alpha ranging from .63 to .78 (Ii & Sipps, 1985). Examples of SD items include, "I never hesitate to go out of my way to help someone in trouble" and "I am always willing to admit when I make a mistake." The PANAS scale includes 10 items rated on a 7-point scale (1 = *never*; 7 = *always*). The scale has demonstrated temporal stability, internal consistency, cross-sample stability, and convergent and discriminant validities (Thompson, 2007). Cronbach's alpha ranged from .73 to .78 for positive affect and from .72 to .76 for negative affect (Thompson, 2007). An example of an item from the

scale is, “Thinking about yourself and how you normally feel, to what extent do you generally feel upset.”

In addition to control variables, procedural remedies recommended by Podsakoff et al. (2003) were employed to reduce CMV where possible. Predictors, criterion variables, moderator, and mediator variables were presented in separate survey sections increasing physical distance between different types of measures. We also used different instructions, various anchor labels and a number of scale points. Both positive and negative items were included in the survey.

Table 3.1
Summary of Questionnaire Measures: Employee Perspective (Study 1)

Measures	No. of items	Author(s)	Scale
Perceived Disability	27	Moss-Morris et al. (2002)	7-point scale; from strongly disagree to strongly agree
LMX	12	Liden & Maslyn (1998)	7-point scale; from strongly disagree to strongly agree
Perception of Leader Empathy	4	Wong & Law (2002)	5-point scale; from strongly disagree to strongly agree
Job Accommodation	21	Shaw et al. (2014)	7-point scale; from very unlikely to has already offered
Social Desirability	6	Thompson (2007)	7-point; from strongly disagree to strongly agree
PANAS	10	Crowne & Marlowe (1960)	7-point scale; from never to always
Presenteeism	6	Koopman et al. (2002)	7-point scale; from strongly disagree to strongly agree
Resilience	25	Connor & Davidson (2003)	7-point scale; from strongly disagree to strongly agree
Job satisfaction	2	Dunham & Smith (1979)	5-point scale; from strongly disagree to strongly agree
Demographics	15	--	--

Note. LMX = Leader-member exchange; PANAS = Positive and Negative Affect Scale.

Participants and Procedure: Supervisor Perspective (Study 2)

A separate survey for supervisors was created using the Qualtrics platform. Participants were also recruited through Mechanical Turk.

For Study 2, we recruited supervisors who are currently, or have in the past two years, supervised an employee with a musculoskeletal injury. We made it clear that the injured employee should have returned to work since the injury. If a supervisor had several injured employees, we indicated they should answer questions based on the most recent situation. Only supervisors who were 18 or older and supervised at least one employee had been included in the analysis.

Measures (Study 2)

A brief description of measures for Study 2 is presented in Table 3.2. A detailed discussion of the rationale and choice of measures is provided below.

Perceived disability. We used use the Revised Illness Perception Questionnaire (IPQ-R) to measure supervisors' perceptions of subordinate disability (Moss-Morris et al., 2002). The details regarding demonstrated validity and reliability are presented in the section for employee scales. For the supervisor questionnaire, we made minor adjustments to the question style to reflect the workplace context and musculoskeletal injury rather than illness, and to address the supervisor's perception of perceived disability severity. Respondents were asked to indicate on a 7-point scale (1 = *strongly disagree;* 7 = *strongly agree)*, the extent of their disagreement/agreement with each statement. For example, "My illness is/was likely to be permanent rather than temporary" was modified to "My subordinate's injury is/was likely to be permanent rather than temporary". "My illness is/was a serious condition" was modified to "My subordinate's injury is/was a serious condition."

Leader-member exchange. To assess supervisor perspectives we used the same Liden and Maslyn's (1998) LMX-MDM scale as we used to assess employee perspectives. The details are presented in the section for employee scales. We asked respondents to indicate on a 7-point scale (1 = *strongly disagree;* 7 = *strongly agree)* the extent of their disagreement/agreement with each statement. Example of items include, "This employee is a lot of fun to work with" (affect); "This employee would defend me to others in the organization if I make an honest mistake" (loyalty); "This employee does work for me that go beyond what is specified in his/her job description" (contribution); and "I respect this employee's knowledge of and competence on the job" (professional respect).

Leader empathy. The Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006) was used to measure leader empathy. The scale has demonstrated high construct validity and internal consistency (Baldner & McGiley, 2014; Jolliffe & Farrington, 2006). A Cronbach's alpha for cognitive and affective dimensions was .72 and .82, respectively. The BES is a 20-item scale developed to assess cognitive and affective elements of empathy. Affective empathy refers to the ability to experience emotions of others, while cognitive empathy reflects the ability to understand other people's emotions (Mehrabian & Epstein, 1972). The BES, as most empathy scales (e.g., Hogan, 1969; Hojat, Mangione, Gonnella, Nasca, Veloski, & Kane, 2001; Mehrabian & Epstein, 1972; Spreng et al., 2009), measures empathy as a trait asking general questions about the ability to emphasize. We also tried to incorporate the notion of empathy as a state by framing supervisors to think about the employee with injury. The original scale contains 9 items to assess cognitive empathy and 11 items to assess affective empathy. All items have demonstrated high levels of factor loadings of .50 or higher (Costello & Osborne, 2005). To reduce questionnaire length, we randomly

chose 10 items (five from affective and five from cognitive dimensions). The following analysis demonstrated that reduced scale had sound psychometric properties (see Chapter 5). The scale has several reversed items and responses were obtained on a 5-point scale (1 = *strongly disagree;* 5 = *strongly agree)*, indicating the extent of their disagreement/agreement with each statement. Sample items include, "After being with a friend who is sad about something, I usually feel sad" (affective empathy); "I can understand my friend's happiness when she/he does well at something" (cognitive empathy).

Job accommodation. We used the newly developed Job Accommodation Scale (JAS) to measure job accommodation in Study 2 (Shaw et al., 2014). The details are presented in the section for employee scales. We measured job accommodation on a 7-point scale (1 = *very unlikely;* 7 = *has already been offered*). For the supervisor questionnaire, sample items included, "Avoid awkward postures" (modified physical workload); "Rotate between job tasks" (modified work environment); "Change work time" (modified work schedule); "Assign to another job temporarily" (alternate duties); and "Arrange for others to help" (arranged work assistance).

Performance. We employed the In-role Behavior (IRB) instrument to assess supervisors' perceptions of employee performance (Williams & Anderson, 1991). The scale has demonstrated high level of internal consistency ($\alpha = .90$) (Williams & Anderson, 1991).The scale is unidimensional and is comprised of 7 items, each rated on a 7-point scale (1 = *never;* 7 = *always*). A sample item is "The employee adequately completes assigned duties."

Control variables. As we noted earlier, several variables have the potential to influence the focal variables and relationships presented in these studies: worker tenure with the subordinate, age (Sin et al., 2009), gender (Bauer & Green, 1996;

Colella & Varma, 2001; Hojat et al., 2002), education, time with supervisor/subordinate (Dienesch & Liden, 1986), and job type (Shaw et al., 2014). We also believe that personal experience with injuries can increase dynamic component of empathy. Thus, we included questions addressing whether supervisors or their relatives have experienced musculoskeletal injuries. In summary, we measured relevant demographic variables, such as age, gender, educational level, job tenure, tenure with a subordinate, frequency of interactions with a subordinate, and personal experience with musculoskeletal injuries.

As the CMV can threaten the validity of the conclusions about the relationships between variables causing both random and systematic measurement errors (Podsakoff et al., 2003), we included social desirability (Crowne & Marlowe, 1960) and positive and negative affect (PANAS) (Thompson, 2007) scales as control variables. The social desirability (SD) scale is comprised of 6 items, each rated on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). Examples of SD items include: "I never hesitate to go out of my way to help someone in trouble" and "I am always willing to admit when I make a mistake". The PANAS scale includes 10 items rated on a 7-point scale (1 = *never*; 7 = *always*). An example of an item from the scale is: "Thinking about yourself and how you normally feel, to what extent do you generally feel upset".

In addition to control variables, we employed several procedural remedies recommended by Podsakoff et al. (2003). Predictors, criterion variables, moderator, and mediator were presented in separate survey sections increasing physical distance between different types of measures. We also used different instructions, various anchor labels and a number of scale points.

Table 3.2

Summary of Questionnaire Measures: Supervisor Perspective (Study 2)

Measures	No. of items	Author(s)	Scale
LMX	12	Liden & Maslyn (1998)	7-point scale; from strongly disagree to strongly agree
Empathy	10	Jolliffe & Farrington (2006)	5-point scale; from strongly disagree to strongly agree
Job Accommodation	21	Shaw et al. (2014)	7-point scale; from very unlikely to has already offered
Perceived Disability	27	Moss-Morris et al. (2002)	7-point scale; from strongly disagree to strongly agree
Performance	7	Williams & Anderson (1991)	7-point scale; from never to always
Social Desirability	6	Thompson (2007)	7-point scale; from strongly disagree to strongly agree
PANAS	10	Crowne & Marlowe (1960)	7-point scale; from never to always
Demographics	15	--	--

Note. LMX = Leader-member exchange; PANAS = Positive and Negative Affect Scale.

Statistical Analyses

Due to the use of metric measures and need for conditional process analysis (moderated mediation), the survey data for both studies were analyzed using hierarchical multiple regression and conditional process analyses. Following Anderson and Gerbing's (1998) recommendations, we conducted a series of confirmatory factor analysis (CFA) to examine the dimensionality and distinctiveness of the measures before proceeding to the analysis. Specifically, we assessed the psychometric properties of the measures, such as reliability and construct (convergent-discriminant) validity of the measures. We conducted several analyses to test the psychometric properties of the measures. A series of confirmatory factor analyses were applied to assess the distinctiveness of the self-reported constructs. We employed the following indices to examine the fit of the measurement models: $\chi 2$

statistic, the goodness of fit index (GFI), incremental fit index (IFI), comparative fit index (CFI) (Bentler, 1990), and root mean square error of approximation (RMSEA) (Browne & Cudeck, 1993). All indices were expected to be at the acceptable levels: greater than .90 for CFI, GFI, and IFI and less than .10 for RMSEA (Hair, Black, Babin, Anderson, & Tatham, 2006). Hair et al. noted that indices that were three per cent away from appropriate levels were considered as acceptable assuming that an appropriate fit would have been reached with a bigger sample. We also performed Harman's single-factor test and partial correlations test, controlling for social desirability and negative affect to gather evidence against CMV.

At the next step, we conducted hierarchical multiple regression analysis and conditional process analysis to test the major hypotheses of moderated mediation. To test hypotheses 1 and 2, we conducted hierarchical multiple regression analysis. Moderation hypothesis (hypothesis 3) was tested by means of four-step hierarchical multiple regression analysis (Baron & Kenny, 1986). For hierarchical multiple regression, we included variables in the regression in the following order: (1) control variables; (2) predictor variables; (3) moderator variable(s); (4) interaction terms (predictor variables X moderator variable(s)). For each interaction pair[1], scores on perceived disability dimensions and empathy were converted into *z*-scores and then a product term was computed. The interaction term (the beta weight of the product term) must be significant if the moderator hypothesis was to be confirmed.

To test hypothesis 4, hierarchical regression analysis was conducted to examine whether LMX mediated the relationships between perceived disability severity and four outcomes. Baron and Kenny (1986) proposed four conditions to evaluate mediation: (a) The predictor variable is related to the outcome variable; (b)

[1] Product of perceived disability and leader empathy.

The predictor variable is related to the mediator; (c) The mediator is related to the outcome variable; (d) When the predictor and mediator variables are used simultaneously, the relationship between predictor and outcome variables is greatly reduced (partial mediation) or non-significant (full mediation).

To examine the moderated mediation of perceived disability and leader empathy on employee outcomes (hypothesis 5) we employed regression-based techniques proposed by Preacher and Hayes (2008). The indirect effects were tested using the PROCESS add-on for SPSS (Hayes, 2013). PROCESS allows estimation of moderated mediation effects with multiple mediators. Bootstrapping with 5000 replications was employed to generate bias-corrected confidence intervals. We followed Hayes' recommendations to identify significance of conditional indirect effects. If the moderated mediation hypothesis was to be confirmed, lower level and upper level confidence intervals had to lie on the same side (both negative or both positive). If both confidence intervals were negative, then there was a significant negative indirect effect. If both confidence intervals were positive, there was a significant positive indirect effect.

Statistical analyses were replicated for Study 2. In our analysis, we controlled for those demographic variables that were associated with the dependent variables. All statistical analyses were performed by means of IBM SPSS/Amos 22.0.

Chapter 4: Results (Employee Perspective, Study 1)

Sample Characteristics

Three hundred U.S. adults completed the survey online in exchange for payment through Amazon.com's Mechanical Turk. Of these 300, 36 were eliminated due to failure to pass screening questions, incomplete online survey[2], or duplicate responses, resulting in an overall completion rate of 88%.[3] We conducted a non-response bias test by comparing demographic variables, such as age, gender, organizational tenure, level of education, time off work because of injury, and tenure with current supervisor. We did not find any significant difference ($p < .05$) between the two groups of respondents.

Sample demographic profile is shown in Table 4.1. Employees were mostly in the age range of 25 to 44 years (M = 35.8; SD = 11.2), and 53% percent of participants were male. In terms of ethnicity, 86% were Caucasian, followed by African American (7%), Asian (3%), and others (4%). About 53% of participants were degree holders (bachelor's, master's, or doctorate), followed by high school (30%), and diploma holders (17%). The tenure with the current organization was mostly in the range of two to eight years ($M = 5.1$; $SD = 1.9$) and the average tenure with the current immediate supervisor was mostly in the range of two to six years ($M = 4.5$; $SD = 1.7$). Ninety per cent of employees had been working for more than 35 hours per week. Almost 52% of participants had musculoskeletal injuries that occurred at work.

[2] We did not consider questionnaires that were missing only several variables as incomplete
[3] Qualtrics temporarily collects IP addresses. Duplicate IP addresses were removed from the data as a cautionary measure.

Table 4.1

Demographic Profile: Employee Perspective (Study 1)

Variable	*Frequency (percentage)*	*Variable*	*Frequency (percentage)*
Age (years)		*Job title*	
25 or less	48 (18.7)	Intern	3 (1.1)
26-30	58 (22.5)	Entry level	64 (24.2)
31-35	42 (16.3)	Analyst / Associate	109 (41.3)
36-40	39 (15.1)	Manager	66 (25.0)
41-45	21 (8.3)	Senior manager	6 (2.3)
46-50	15 (5.9)	Director	3 (1.1)
51-55	16 (6.4)	C level executive	1 (.4)
56-60	9 (3.6)	President or CEO	1 (.4)
61+	8 (3.2)	Other	11 (4.2)
Employee gender		*Frequency of interaction with supervisor*	
Male	138 (53.0)	1 Not at all	0 (.0)
Female	124 (47.0)	2	3 (1.1)
Supervisor gender		3	12 (4.6)
Male	150 (57.5)	4	34 (12.9)
Female	111 (42.5)	5	56 (21.3)
Race		6	73 (27.8)
White/Anglo or European	227 (86.0)	7 Always	85 (32.3)
Black/African	18 (6.8)	*Work hours per week*	
Asian, Pacific Islander	8 (3.0)	35 hours a week or more	237 (90.0)
Bi-racial or multi-racial	8 (3.0)	Less than 35 hours a week	25 (10.0)
Other	3 (1.1)	*Tenure with organization*	
Education		Less than 6 month	8 (3.0)
High School or below	78 (29.5)	6 months to 1 year	14 (5.3)
College Diploma	45 (17.0)	1-2 years	33 (12.5)
Bachelors	108 (40.9)	2-3 years	47 (17.8)
Masters	29 (11.0)	3-5 years	53 (20.1)
Doctorate	3 (1.1)	5-8 years	45 (17.0)
In progress	1 (.4)	8-12 years	29 (11.0)
--	--	12+ years	35 (13.3)

Table (continued)

Variable	*Frequency (percentage)*	*Variable*	*Frequency (percentage)*
Tenure with current supervisor		*Period off work because of injury*	
Less than 6 months	8 (3.1)	1 day	45 (17.0)
6 months to 1 year	21 (8.0)	2 days to 1 week	115 (43.6)
1-2 years	57 (21.8)	1-2 weeks	45 (17.0)
2-3 years	53 (20.2)	2 weeks to 1 month	25 (9.5)
3-5 years	55 (21.0)	1-3 months	21 (8.0)
5-8 years	30 (11.5)	3-6 months	8 (3.0)
8-12 years	19 (7.3)	6 months to 1 year	3 (1.1)
12+ years	19 (7.3)	1+ year	2 (.8)
Injury occurred at work		--	--
Yes	127 (48.0)	--	--
No	137 (52.0)	--	--

Psychometric Properties of the Measures

Before we tested hypotheses, we examined psychometric properties of all employed measures. Perceived disability, LMX, resilience, job accommodation, and presenteeism are multidimensional scales. We investigated dimensionality of the focal employee reported variables and distinctiveness of the measures through CFA.

Dimensionality and distinctiveness of the measures. Prior to conducting the CFA, we performed exploratory factor analysis with principal components extraction and Varimax rotation. We excluded some items from the CFA based on factor loadings and cross-loadings criteria (see Appendix A1). Following recommendations of Leech, Barrett, and Morgan (2005), we excluded items with low factor loadings (less than .40) and/or high factor cross-loadings (higher than .30). For all multidimensional scales, we compared the original models with one-factor models.

For all multidimensional scales, the analyses showed the original models to have a significantly better fit than the one-factor models (Table 4.2). We compared the five-factor perceived disability model (timeline acute/chronic, timeline cyclical,

consequence, personal control, and treatment control) with the one-factor model. The analysis showed the five-factor model to have a significantly better fit than the one-factor model. For LMX, presenteeism, job accommodation, and resilience scales, the original multi-dimensional models demonstrated a better fit than corresponding one-factor models as well. We did not test job satisfaction scale as it was uni-dimensional and had only 2 items.

Table 4.2

Dimensionality of the Measures and Construct Validity for the Employee Perspective (Study 1): Confirmatory Factor Analysis Results

Measurement Model	*Fit Indices*					
	χ2	*df*	*IFI*	*CFI*	*GFI*	*RMSEA*
Perceived disability						
5-factor	451.90	160	.92	.92	.85	.08
1-factor	3050.46	324	.46	.46	.42	.18
Empathy						
1-factor	1.70	2	1	1	.99	.00
Leader-Member Exchange						
4-factor	136.59	48	.98	.98	.93	.08
1-factor	697.43	54	.83	.83	.67	.21
Presenteeism						
2-factor	31.16	8	.97	.97	.97	.10
1-factor	178.00	9	.76	.76	.79	.27
Job Accommodation						
5-factor	127.70	67	.98	.98	.94	.06
1-factor	1971.00	189	.61	.60	.51	.19
Resilience						
4-factor	20.80	21	1	1	.98	.00
1-factor	971.00	275	.84	.84	.75	.10
Hypothesized model						
22-factor	1225.40	755	.94	.94	.84	.05
7-factor	3407.60	891	.69	.69	.63	.10
1-factor	5932.30	901	.37	.37	.41	.15

Note. $N = 264$. IFI = Incremental fit index; CFI = Comparative fit index; GFI = Goodness of fit index; RMSEA = Root square error of approximation.

To test construct validity, we compared the hypothesized 22-factor model[4] with 7-factor model (all scales are uni-dimensional) and 1-factor model (Table 4.2).

[4] 22-factor model included the following constructs: five dimensions of perceived disability; four dimensions of LMX; two dimensions of presenteeism; five dimensions of JAS; one dimension of job satisfaction; one dimension of leader empathy; and four dimensions of resilience.

We followed previous research (Sass & Smith, 2006) and randomly combined scale items into parcels for each variable. Each variable had two parcels. The analysis showed satisfactory fit indices and the 22-factor model had a significantly better fit than the 7-factor model and the 1-factor model. Given the CFA results, we considered these variables as distinct constructs.

To calculate interdependence among scales, we employed the following steps: (1) converted Pearson correlations into Fisher's *z*-scores; (2) calculated average *z*-score among dimensions for each scale; and (3) transferred *z*-scores to Pearson correlations. Moderate interdependence among dimensions provided additional evidence of the distinctiveness of the measures (Table 4.3). The LMX scale showed relatively high interdependence. Although LMX dimensions were highly correlated, it had been shown that antecedents and consequences of each dimension were not the same (Liden & Maslyn, 1998). Given the CFA results, we continued analyzing LMX as a multidimensional construct.

Table 4.3
Interdependence among Scales: Employee Perspective (Study 1)

Scale	*r*
Illness perception questionnaire	.34**
Leader-member exchange	.76**
Job accommodation scale	.49**
Resilience	.47**
Presenteeism	.47**

Note. $N = 264$.
** $p < .01$

Reliability for individual dimensions was assessed using internal consistency measure (Cronbach's alpha). As can be seen in Table 4.4, except for spiritual influences (resilience dimension), all other constructs had acceptable Cronbach's alpha of .70 or greater (Hair et al., 2006).

Evidence against common method variance. We gathered several evidence against CMV. First, we conducted Harman's single-factor test and assessed the un-rotated solution involving all 62 items in an exploratory factor analysis. The analysis, constrained to 12 factors, explained a total of 74% of the variance. The first factor accounted for 25% of the variance, providing evidence against CMV (Podsakoff et al., 2003). Podsakoff et al. noted that Harman's single-factor test did not statistically control method effects. Second, we employed an additional test against CMV that had been used for controlling the effects of method variance. We calculated correlations between predictor and criterion variables partialling out social desirability and negative affect (see Appendices B1 through B5). The differences between the partial correlations and zero-order correlations were not significant providing additional evidence against CMV (Spector, Chen, & O'Connell, 2000). These analyses aligned with the CFA results (Table 4.2) that demonstrated the distinctiveness of the employed measures.

Test of Hypotheses

Table 4.4 contains means, standard deviations, correlations, and Cronbach's alpha of all variables.

Table 4.4

Descriptive Statistics, Correlations, and Internal Reliability Coefficients: Employee Perspective (Study 1)

Variables	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1. Age	35.82	11.17	--[b]													
2. Em/ee gender	--[a]	--[a]	-15[*]	--[a]												
3. Sup gender	--[a]	--[a]	-18[**]	40[**]	--[a]											
4. Education	2.38	1.08	-03	15[*]	-04	--[b]										
5. Communication	5.67	1.24	15[*]	-04	-03	02	--[b]									
6. Lost time	2.65	1.44	07	03	03	-03	13[*]	--[b]								
7. SD	4.66	1.13	07	-07	-06	-00	15[*]	09	**77**							
8. NA	2.22	1.18	-26[**]	-01	04	-14[*]	-14[*]	04	-12[*]	**90**						
9. IPQ_1	4.47	1.74	02	-14[*]	-11	-15[*]	08	23[**]	10	09	**93**					
10. IPQ_2	4.13	1.58	07	-12[*]	-06	-18[**]	-03	11	02	18[**]	39[**]	**87**				
11. IPQ_3	3.53	1.52	-01	02	07	-13[*]	00	33[**]	10	17[**]	36[**]	28[**]	**81**			
12. IPQ_4	3.55	1.35	00	-03	-09	-11	-10	09	-04	12	39[**]	19[**]	25[**]	**89**		
13. IPQ_5	2.71	1.33	-06	-02	-04	-01	-20[**]	07	02	22[**]	36[**]	29[**]	36[**]	52[**]	**82**	
14. EM	3.48	1.11	16[**]	-01	-10	13[*]	36[**]	-04	25[**]	-25[**]	-11	-09	-09	-27[**]	-08	**96**

Table (continued)

Variable	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
15. LMX_A	5.03	1.64	15*	02	-03	09	44**	-10	22**	-29**	-09	-07	-14*	-22**	-10	77**
16. LMX_L	5.16	1.61	15*	-01	00	06	36**	-11	20**	-23**	-10	-11	-16**	-19**	-09	73**
17. LMX_C	5.37	1.35	25**	-02	-06	05	46**	-09	31**	-26**	00	-04	-07	-17**	-13*	51**
18. LMX_P	5.23	1.64	18**	03	02	10	41**	-07	26**	-26**	-08	-10	-15*	-24**	-15*	72**
19. JAS_1	3.72	1.97	20**	-08	-03	08	10	06	18**	-06	00	-05	04	-06	14*	35**
20. JAS_2	3.47	1.91	10	-10	01	11	17**	06	17**	-01	07	04	06	-07	11	44**
21. JAS_3	2.62	1.69	-02	-05	08	02	12	12	15*	07	08	14*	23**	-08	18**	28**
22. JAS_4	2.50	1.57	-03	,06	10	05	05	10	15*	01	-02	10	24**	-08	24**	27**
23. JAS_5	3.69	1.92	15*	-06	03	12	23**	00	09	-06	00	-06	12	-17**	01	42**
24. RES_1	5.35	1.26	14*	07	16**	12	26**	08	36**	-40**	-05	-16*	00	-11	-18**	25**
25. RES_2	5.66	1.04	16**	-03	09	01	26**	01	33**	-40**	-10	-08	-24**	-24**	-29**	23**
26. RES_3	5.40	1.16	14*	02	-04	18**	19**	09	35**	-47**	-10	-10	-9	-21**	-21**	25**
27. RES_4	4.2	1.81	10	-17**	-07	-07	12*	-03	19**	-10	06	14*	03	-15*	-04	17**
28. PRE_1	3.31	1.37	-13*	-04	04	-08	02	13*	-14*	06	05	01	37**	19**	12*	-13*
29. PRE_2	4.09	1.60	-04	-01	08	-18**	-01	21**	04	14*	28**	26**	71**	24**	28**	-13*
30. Job satisfaction	3.88	1.01	18**	-04	04	14*	24**	-10	36**	-45**	-20**	-19**	-.19**	-25**	-19**	53**

Table (continued)

Variables	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
15. LMX_A	**95**															
16. LMX_L	86**	**95**														
17. LMX_C	65**	67**	**89**													
18. LMX_P	82**	79**	69**	**94**												
19. JAS_1	32**	34**	22**	29**	**92**											
20. JAS_2	38**	39**	23**	35**	61**	**89**										
21. JAS_3	25**	20**	8	18**	39**	49**	**81**									
22. JAS_4	18**	15*	5	18**	43**	49**	64**	**86**								
23. JAS_5	37**	40**	26**	34**	54**	41**	43**	43**	**90**							
24. RES_1	28**	29**	44**	33**	09	04	00	03	08	**69**						
25. RES_2	35**	34**	47**	36**	10	00	-05	-09	07	.62**	**86**					
26. RES_3	24**	23**	34**	28**	12	01	-04	01	07	57**	65**	**84**				
27. RES_4	15*	10	24**	16*	06	14*	13*	19**	10	25**	36**	28**	**67**			
28. PRE_1	-17**	-18**	-16*	-19**	03	05	06	09	11	-19**	-29**	-21**	-09	**80**		
29. PRE_2	-14*	-12	-03	-19**	01	01	15*	17**	09	01	-16**	-10	07	47**	**85**	
30. Job satisfaction	56**	53**	41**	54**	27**	25**	11	10	27**	39**	43**	46**	18**	-24**	-25**	**90**

Note. *N* varies from 258 to 264. Diagonal entries in bold indicate coefficients alpha. Decimals points are omitted from correlation coefficients and Cronbach's alpha coefficients. [a] Single-item categorical measure (0 = Female; 1 = Male). [b] Single-item ration measure. Communication = Frequency of communication with a supervisor; EM = Empathy; Em/ee gender = Employee gender; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical;IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical

workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; Lost time = Work time lost because of injury; NA = Negative affect; PRE_1 = Presenteeism: Completing work; PRE_2 = Presenteeism: Avoiding distractions; RES_1 = Resilience: Trust in one's instincts; RES_2 = Resilience: Positive acceptance to change; RES_3 = Resilience: Control; RES_4 = Resilience: Spiritual influences; SD = Social desirability; Sup gender = Supervisor gender.
* $p < .05$; ** $p < .01$

As expected, LMX positively correlated with job accommodation, job satisfaction, and resilience, and negatively correlated with presenteeism. One dimension of perceived disability--personal control--had a strong negative correlation with all LMX dimensions ranging from -.17 to -.24 ($p < .01$). All dimensions of perceived disability were coded in a way that higher scores reflected severity of perceived disability. In particular, higher scores on the personal control and treatment control dimensions meant less perceived control over the injury.

Illness consequences significantly correlated with LMX-Affect ($r = -.14$, $p < .05$), LMX-Loyalty ($r = -.16$, $p < .01$), and LMX-Respect ($r = -.15$, $p < .05$). Correlations between treatment control and LMX ranged from -.09 (*ns*) to -.15 ($p < .05$). Illness timeline dimensions (acute/chronic and cyclical) were not significantly related to LMX. Perceived disability dimensions were negatively related to job satisfaction (correlation coefficients ranged from -.19 ($p < .01$) to -.25 ($p < .01$)) and resilience (correlation coefficients ranged from .03 (*ns*) to -.29 ($p < .01$)), and were positively related to job accommodation (correlation coefficients ranged from -.08 (*ns*) to .24 ($p< .01$)) and presenteeism (correlation coefficient ranged from .05 (*ns*) to .71 ($p < .01$)).

Hypothesis 1. Hypothesis 1 suggested that perceived disability severity was negatively associated with LMX quality. As can be seen in Table 4.5, controlling for the age and frequency of interaction with the supervisor, perceived disability explained additional variance in LMX quality ($\Delta R^2 = .02$, $p < .05$). Two dimensions of perceived disability, consequences for job and personal control, were negatively related to LMX quality. The consequences dimension was negatively related to LMX-Affect ($\beta = -.12$, $p < .05$) and LMX-Loyalty ($\beta = -.14$, $p < .05$), but the relationships with the LMX-Contribution and LMX-Respect dimensions were not significant.

Personal control negatively associated with all dimensions of LMX. Surprisingly, the treatment control dimension[5] was positively related to LMX-Affect and LMX-Loyalty, such that the less control the employee had over the injury, the more they felt affection for, and loyalty to, their supervisor. Overall, hypothesis 1 received partial support.

Table 4.5

Regression Analysis of Perceived disability on Leader-Member Exchange: Employee Perspective (Study 1)

	Dependent Variable			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*
Independent Variable	*β*	*β*	*β*	*β*
Step 1	(R^2 = .20**)	(R^2 = .14**)	(R^2 = .25**)	(R^2 = .18**)
Age	.09 (-.00; .03)	.10 (-.00; .03)	.18** (.01; .04)	.12* (.00; .04)
Frequency of interaction with supervisor[a]	.43** (.42; .71)	.36** (.31; .61)	.44** (.36; .60)	.39** (.37; .67)
Step 2	ΔR^2 = .06**	ΔR^2 = .05**	ΔR^2 = .02	ΔR^2 = .05**
IPQ: Timeline acute/chronic	-.06 (-.18; .06)	-.04 (-.17; .09)	.03 (.-.08; .12)	-.02 (-.14; .11)
IPQ: Timeline cyclical	-.01 (-.13; .12)	-.05 (-.17; .08)	-.01 (-.11; .09)	-.05 (-.18; .07)
IPQ: Consequences	-.12* (-.26; .00)	-.14* (-.28; -.02)	-.05 (-.15; .06)	-.10 (-.24; .02)
IPQ: Personal control	-.21** (-.41; -.09)	-.17* (-.36; -.04)	-.14* (-.27; -.01)	-.20** (-.41; -.09)
IPQ: Treatment control	.17* (-.05; .38)	.16* (.03; .37)	.05 (-.09; .19)	.10 (-.04; .30)

Note. N = 264. [a] Single-item ratio measure; IPQ = Illness perception questionnaire; LMX = Leader-member exchange. 95% confidence intervals are presented in parentheses.

* $p < .05$; $p < .01$

Hypothesis 2. Hypothesis 2 stated that LMX was positively related to job accommodation, resilience, and job satisfaction, and was negatively related to presenteeism. The hypothesis was tested by means of hierarchical multiple regression analysis. The results are presented in Table 4.6 and Table 4.7.

[5] Higher score of treatment control dimension reflects that treatment has less control over injury.

Table 4.6

Regression Analysis of LMX on Job Accommodation and Job Satisfaction: Employee Perspective (Study 1)

	Dependent Variable					
	JAS: Modified Physical Workload	*JAS: Modified Work Environment*	*JAS: Modified Work Schedule*	*JAS: Alternate Duties*	*JAS: Arranged Work Assistance*	*Job Satisfaction*
Independent Variable	*β*	*β*	*β*	*β*	*β*	*β*
Step 1	(R^2 = .04**)	(R^2 = .03*)	(R^2 = .01)	(R^2 = .00)	(R^2 = .06**)	(R^2 = .08**)
Age	.19**	.08	-.03	-.04	.12	.15*
	(.01; .06)	(-.01; .04)	(-.02; .01)	(-.02; .01)	(-.00; .04)	(.00; .03)
Frequency of interaction with supervisor	.07	.15*	.11	.06	.21**	.21**
	(-.08; .31)	(.05; .43)	(-.01; .32)	(-.09; .23)	(.13; .51)	(.07; .27)
Step 2	ΔR^2 = .10**	ΔR^2 = .13**	ΔR^2 = .06**	ΔR^2 = .04*	ΔR^2 = .12**	ΔR^2 = .27**
LMX Affect	.09	.15	.30*	.15	.03	.31**
	(-.28; .14)	(-.13; .47)	(.03; .59)	(-.12; .40)	(-.26; .33)	(.05; .33)
LMX Loyalty	.28*	.27*	.04	.01	.39**	.11
	(-.20; .43)	(.04; .61)	(-.23; .31)	(-.25; .26)	(.18; .76)	(-.07; .21)
LMX Professional respect	-.05	-.14	-.15	-.16	-.10	-.01
	(.05; .65)	(-.43; .05)	(-.41; .04)	(-.39; .03)	(-.38; .11)	(-.12; .11)
LMX Contribution	.00	.08	-.02	.16	.00	.19
	(-.26; .27)	(-.17; .34)	(-.25; .22)	(-.08; .37)	(-.25; .26)	(-.00; .24)

Note. N = 264. JAS = Job accommodation scale; LMX = Leader-member exchange. 95% confidence intervals are presented in parentheses.

* $p < .05$; ** $p < .01$

The LMX-Loyalty dimension was positively related to the following job accommodations: modified physical workload ($\beta = .28$, $p < .05$), modified work environment ($\beta = .27$, $p < .05$), and arranged work assistance ($\beta = .39$, $p < .01$). Table 4.7 illustrates hierarchical multiple regression analysis for the association between LMX dimensions and resilience and presenteeism. With regards to resilience, the LMX-Contribution was positively associated with all dimensions of resilience: trust in one's instincts ($\beta = .38$, $p < .01$), positive acceptance to change ($\beta = .40$, $p < .01$), control ($\beta = .29$, $p < .01$), and spiritual influences ($\beta = .27$, $p < .01$). Only two LMX dimensions, LMX-Contribution and LMX-Respect, were related to the presenteeism avoiding distractions dimension. Interestingly, the two LMX dimensions had different directions of influence on the avoiding distractions dimension. The LMX-Contribution had a positive association with avoiding distractions ($\beta = .20$, $p < .05$); whereas, LMX-Respect was negatively related to avoiding distractions ($\beta = -.31$, $p < .01$). The analysis also showed that LMX-Affect and LMX-Respect had a strong positive association with job satisfaction ($\beta = .31$, $p < .01$; $\beta = .20$, $p < .05$, respectively).

Hypothesis 3. Hypothesis 3 stated that perception of leader empathy moderated the relationships between perceived disability severity and LMX, such that higher perceived disability had a stronger negative effect on LMX for employees whose supervisors were lower on empathy. Taken together, the moderation hypothesis received partial support (Table 4.8). Leader empathy moderated the relationships between perceived disability and LMX, but only for some dimensions. In particular, significant moderation effects had been found for the following dimensions of perceived disability: personal control and treatment control. Interactions between these two dimensions and leader empathy were significant only on LMX-Loyalty.

Table 4.7

Regression Analysis of LMX on Resilience and Presenteeism: Employee Perspective (Study 1)

	Dependent Variable					
	RES: Trust in Instincts	*RES: Positive Acceptance to Change*	*RES: Control*	*RES: Spiritual Influences*	*PRE: Completing Work*	*PRE: Avoiding Distractions*
Independent Variable	*β*	*β*	*β*	*β*	*β*	*β*
Step 1	(R^2 = .09**)	(R^2 = .08**)	(R^2 = .05**)	(R^2 = .05**)	(R^2 = .05**)	(R^2 = .07**)
Age	.12 (-.00; .03)	.13* (.00; .02)	.12 (.00; .03)	.06 (-.01; .03)	-.14* (-.03; -.00)	-.06 (-.03; .01)
Employee gender	.09 (-.08; .52)	.01 (-.23; .26)	.04 (-.19; .37)	-.15* (-.98; -.10)	--	--
Frequency of interaction with supervisor	.25** (.14; .38)	.24** (.11; .31)	.17** (.05; .28)	.11 (-.01; .35)	--	--
Education	--	--	--	--	-.09 (-.26; .05)	-.17** (-.43; -.08)
Lost time	--	--	--	--	.14* (.02; .25)	.21** (.10; .36)
Step 2	ΔR^2 = .11**	ΔR^2 = .14**	ΔR^2 = .07**	ΔR^2 = .05**	ΔR^2 = .02	ΔR^2 = .04*
LMX Affect	-.06 (-.25; .14)	.06 (-.12; .20)	.07 (-.14; .23)	.17 (-.11; .49)	.01 (-.22; .23)	-.02 (-.27; .24)
LMX Loyalty	-.04 (-.21; .17)	-.04 (-.18; .13)	-.15 (-.29; .07)	-.26* (-.59; -.01)	-.04 (-.25; .18)	.05 (-.20; .30)
LMX Professional respect	.38** (.19; .52)	.40** (.17; .44)	.29** (.09; .40)	.27* (.13; .61)	-.01 (-.19; .17)	.20* (.04; .44)
LMX Contribution	.09 (-.10; .24)	.04 (-.11; .16)	.11 (-.08; .24)	.03 (-.22; .29)	-.11 (-.28; .11)	-.31** (-.52; -.08)

Note. N = 264. Employee gender: 0 = Female, 1 = Male; LMX = Leader-member exchange; Lost time = Time off work because of injury; PRE = Presenteeism; RES = Resilience. 95% confidence intervals are presented in parentheses.

* $p < .05$; ** $p < .01$

Table 4.8

Regression Analysis of Perceived Disability X Empathy Interaction on Leader-Member Exchange: Employee Perspective (Study 1)

	Dependent Variable			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*
Independent Variable	*β*	*β*	*β*	*β*
Step 1	(R^2 = .20**)	(R^2 = .14**)	(R^2 = .25**)	(R^2 = .18**)
Age	.09	.10	.18**	.12*
Frequency of interaction with supervisor[a]	.43**	.36**	.44**	.39**
Step 2	ΔR^2 = .06**	ΔR^2 = .05**	ΔR^2 = .02	ΔR^2 = .05**
IPQ: Timeline acute/chronic (A)	-.06	-.04	.03	-.02
IPQ: Timeline cyclical (B)	-.01	-.05	-.01	-.05
IPQ: Consequences (C)	-.12*	-.14*	-.05	-.10
IPQ: Personal control (D)	-.21**	-.17*	-.14*	-.20**
IPQ: Treatment control (E)	.17*	.16*	.05	.10
Step 3	ΔR^2 = .37**	ΔR^2 = .35**	ΔR^2 = .10**	ΔR^2 = .31**
Empathy (F)	.69** (1.00; 1.25)	.67** (.91; 1.17)	.36** (.45; .72)	.63** (.89; .12)
Step 4	ΔR^2 = .01	ΔR^2 = .02*	ΔR^2 = .01	ΔR^2 = .01
A * F	.01 (-.14; .16)	-.02 (-.19; .12)	.06 (-.10; .23)	.01 (-.17; .16)
B * F	-.01 (-.17; .12)	.01 (-.16; .13)	-.03 (-.21; .10)	.06 (-.07; .24)
C * F	.02 (-.10; .19)	.05 (-.07; .23)	-.04 (-.18; .13)	.02 (-.11; .20)
D * F	.11 (-.08; .30)	.15* (-.02; .37)	-.01 (-.31; .10)	.10 (-.10; .31)
E * F	-.09 (-.27; .08)	-.22** (-.47; -.10)	-.04 (-.17; .21)	-.06 (-.24; .14)

Note. N = 264. [a] Single-item ratio measure; IPQ = Illness perception questionnaire; LMX = Leader-member exchange. 95% confidence intervals are presented in parentheses. Confidence intervals for demographic variables and IPQ have been shown in Table 4.5.

* $p < .05$; $p < .01$

We conducted a simple slope analysis to display significant interaction effects (Aiken & West, 1991). We determined simple regression lines at low and high empathy levels (± 1 SD from the mean). Figures 4.1 and 4.2 illustrate significant interaction effects. The interaction between personal control and empathy (Figure 4.1)

suggested that when leader empathy was low the inability to control injury (personal control dimension) had a greater negative effect on LMX-Loyalty. When leader empathy was high, perceived disability had no effect on LMX-Loyalty.

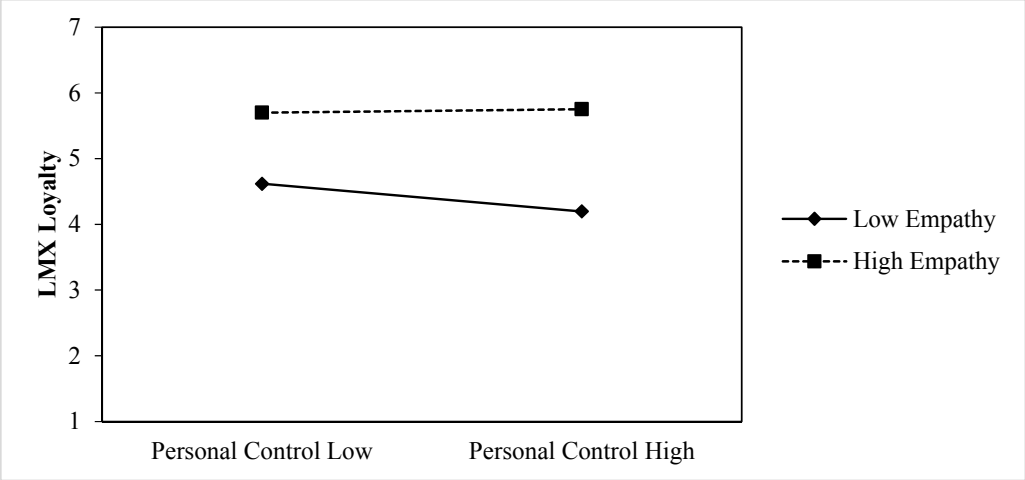

Figure 4.1. Personal control by empathy interaction on LMX-Loyalty (Study 1).

The interaction between treatment control and empathy (Figure 4.2) suggested that when leader empathy was low on empathy the inability to control injury using treatment (treatment control dimension) had a greater negative effect on LMX-Loyalty. When LMX was high, the negative association between perceived disability severity and LMX-Loyalty weakened.

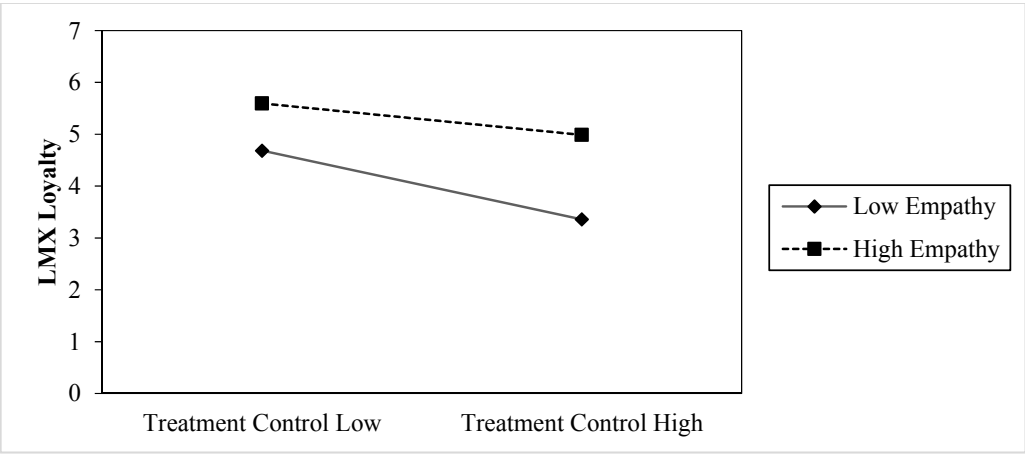

Figure 4.2. Treatment control by empathy interaction on LMX-Loyalty (Study 1).

Hypothesis 4. Hierarchical regression analysis was conducted to examine whether LMX mediated the relationships between perceived disability severity and four outcomes. Hypothesis 4 suggested an indirect effect of perceived disability on the outcomes that became insignificant (full mediation) or weakened (partial mediation) when LMX dimensions were considered. Appendices C1, C2, C3, and C4 contains the results of the mediation analysis. Step 1 shows separate regressions for independent and mediator variables controlling for relevant demographic variables. At Step 2, all variables was included simultaneously.

Hypothesis 4 received partial support. Figures 4.3 through 4.5 illustrate significant mediation effects of LMX on the relationships between perceived disability dimensions and job accommodation dimensions. Prior to making conclusions about mediation effects, we ensured that: (1) disability dimensions were related to LMX dimensions; (2) LMX dimensions were related to the outcomes; and (3) disability dimensions were associated with the outcomes. For the mediation effect to be significant, the relationship between predictor and outcome variables had to be greatly reduced (partial mediation) or become non-significant (full mediation). LMX-Loyalty fully mediated the relationship between personal control and modified physical workload and partially mediated the relationship between treatment control and modified physical workload (Figure 4.3). After inclusion of the LMX-Loyalty dimension, the negative effect of personal control became non-significant, and the positive effect of treatment control was reduced compared to direct effect of perceived disability severity on the outcomes. Personal control was negatively related to modified physical workload ($\beta = -.18$, $p < .05$); however, when LMX-Loyalty was included the association between personal control and modified physical workload became non-significant. Treatment control demonstrated positive significant

association with modified physical workload (β = .29, $p < .01$). After inclusion of the LMX-Loyalty dimension, this association became reduced (β = .23, $p < .01$).

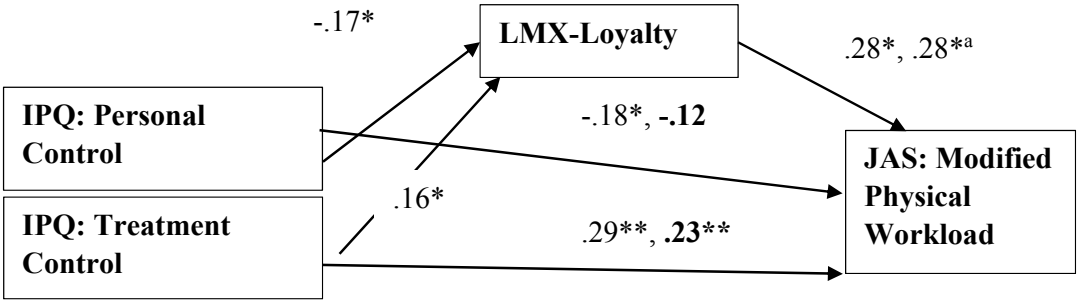

Figure 4.3. Testing mediation hypothesis: Perceived disability -- > LMX-Loyalty -- > job accommodation: Modified physical workload (Study 1). (Standardized regression coefficients in bold indicate support for hypothesis; [a] Regression coefficients of mediation and criterion variable relationship before and after mediator acted as a control variable in the regression equation)

LMX-Loyalty had also been found to fully mediate the relationship between personal control and modified work environment. The relationship between treatment control and modified work environment was only partially mediated (Figure 4.4). Personal control was negatively related to modified work environment (β = -.17, $p <$ .05); however, when LMX-Loyalty was included the association between personal control and modified work environment became non-significant (β = -.10, *ns*). Treatment control demonstrated positive significant association with modified work environment (β = .22, $p < .01$). After inclusion of the LMX-Loyalty dimension, this association became significantly reduced (β = .15, $p < .05$).

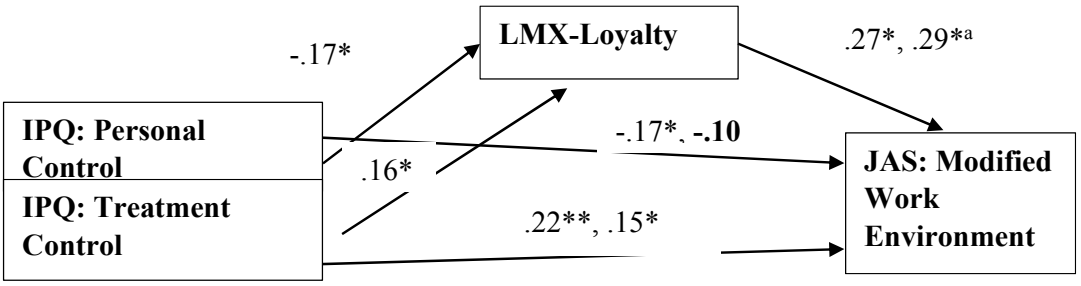

Figure 4.4. Testing mediation hypothesis: Perceived disability -- > LMX-Loyalty -- > job accommodation: Modified work environment (Study 1). (Standardized regression coefficients in bold indicate support for hypothesis; [a] Regression coefficients of mediation and criterion variable relationship before and after mediator acted as a control variable in the regression equation)

The analysis indicated the partial and full mediating effects of LMX-Loyalty on arranged work assistance (Figure 4.5). Personal control was negatively related to arranged work assistance ($\beta = -.24$, $p < .01$). After considering LMX-Loyalty, the negative effect of personal control on arranged work assistance became reduced ($\beta = -.19$, $p < .01$). Treatment control had positive association with arranged work assistance ($\beta = .17$, $p < .05$). After inclusion of the LMX-Loyalty dimension, this association was no longer significant ($\beta = .10$, *ns*).

Regarding the mediation effect of LMX on the relationship between perceived disability and resilience, there was only one significant partial mediation effect (Figure 4.6). The LMX-Contribution partially mediated the relationship between personal control and the spiritual influences resilience dimension. Personal control was negatively related to resilience spiritual influences dimension ($\beta = -.20$, $p < .01$); however, when LMX-Contribution was included the association between personal control and spiritual influences became reduced ($\beta = -.17$, $p < .01$).

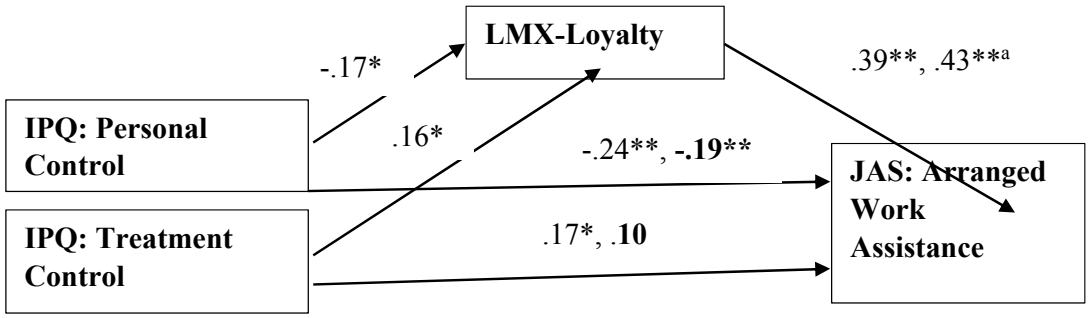

Figure 4.5. Testing mediation hypothesis: Perceived disability -- > LMX-Loyalty -- > job accommodation: Arranged work assistance (Study 1). (Standardized regression coefficients in bold indicate support for hypothesis; [a] Regression coefficients of mediation and criterion variable relationship before and after mediator acted as a control variable in the regression equation)

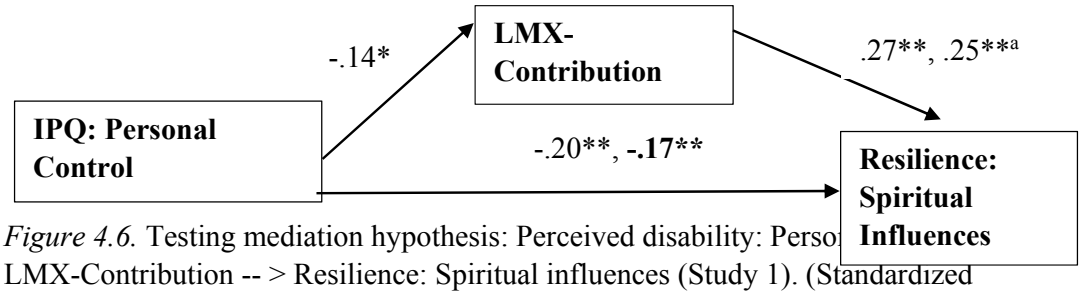

Figure 4.6. Testing mediation hypothesis: Perceived disability: Perso LMX-Contribution -- > Resilience: Spiritual influences (Study 1). (Standardized regression coefficients in bold indicate support for hypothesis; [a] Regression coefficients of mediation and criterion variable relationship before and after mediator acted as a control variable in regression equation.

Hierarchical regression analysis showed that LMX did not mediate the relationships between perceived disability and presenteeism (see Appendices C1 through C4). Three dimensions of perceived disability were related to the presenteeism completing work dimension: timeline acute/chronic ($\beta = -.15$, $p < .05$); consequences ($\beta = .40$, $p < .01$); and personal control ($\beta = .18$, $p < .01$). The perceived disability consequences dimension was related to the presenteeism avoiding distractions dimension ($\beta = .69$, $p < .01$). However, LMX dimensions did not weaken

the relationships between perceived disability dimension and two presenteeism dimensions.

Concerning the job satisfaction outcome, LMX-Affect fully mediated the relationship between personal control and job satisfaction (Figure 4.7). Personal control was negatively related to job satisfaction ($\beta = -.17$, $p < .05$). When LMX-Affect was included, the negative effect of personal control on job satisfaction became non-significant ($\beta = -.06$, *ns*).

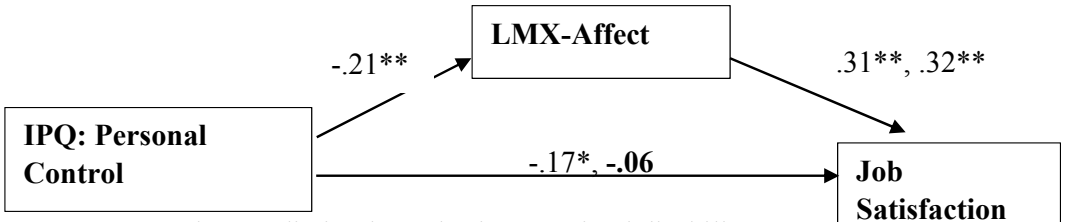

Figure 4.7. Testing mediation hypothesis: Perceived disability -- > LMX -- > job satisfaction (Study 1). (Standardized regression coefficients in bold indicate support for hypothesis; [a] Regression coefficients of mediation and criterion variable relationship before and after mediator acted as a control variable in regression equation)

Hypothesis 5. Hypothesis 5 suggested that leader empathy moderated the indirect effect of perceived disability severity on the outcomes through LMX quality. Hypothesis 5 received partial support. Results of the moderated mediation analyses are presented in Appendices D1 through D12. Significant moderated mediation effects are shown in Table 4.9. Conditional process analysis was conducted only if the following conditions were met: (a) perceived disability was related to LMX; (b) LMX was related to the outcome; and (c) perceived disability was related to the outcome.

Table 4.9

Significant Moderated Mediation Effects: Employee Perspective (Study 1)

Predictor	*Mediator*	*Moderator*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
			JAS: Modified Physical Workload			
IPQ	LMX	Low	**-.0474**	**.0306**	**-.1277**	**-.0041**
Treatment	Professional	Medium	-.0361	.0207	-.0879	-.0048
Control	respect	High	-.0247	.0199	-.0760	.0052
			JAS: Modified Work Schedule			
IPQ	LMX	Low	**-.0316**	**.0179**	**-.0745**	**-.0035**
Treatment	Professional	Medium	-.0240	.0121	-.0525	-.004
Control	respect	High	-.0164	.0128	-.0464	.0046
			JAS: Alternate Duties			
IPQ	LMX	Low	**-.0301**	**.0175**	**-.0729**	**-.0029**
Treatment	Professional	Medium	-.0229	.0119	-.0502	-.0037
Control	respect	High	-.0157	.0122	-.0448	.0042
			Resilience: Trust in Instincts			
IPQ	LMX	Low	-.0232	.0420	-.1087	.0603
Treatment	Contribution	Medium	-.0341	.0210	-.0795	.0033
Control		High	**-.0449**	**.0277**	**-.1137**	**-.0019**
			Resilience: Positive Acceptance to Change			
IPQ	LMX	Low	-.0200	.0396	-.1113	.0442
Treatment	Contribution	Medium	-.0293	.0204	-.0766	.0040
Control		High	**-.0387**	**.0218**	**-.0900**	**-.0020**
			Resilience: Control			
IPQ	LMX	Low	-.0145	.0295	-.0870	.0324
Treatment	Contribution	Medium	-.0212	.0160	-.0633	.0010
Control		High	**-.0280**	**.0182**	**-.0771**	**-.0022**
			Presenteeism: Avoiding Distractions			
IPQ	LMX	Low	**.0417**	**.0299**	**.0014**	**.1287**
Personal	Professional	Medium	.0184	.0172	-.0053	.0672
Control	Respect	High	-.0048	.0153	-.0428	.0223
			Presenteeism: Avoiding Distractions			
IPQ	LMX	Low	-.0150	.0299	-.0903	.0321
Treatment	Contribution	Medium	-.0221	.0171	-.0695	.0008
Control		High	**-.0291**	**.0207**	**-.0888**	**-.0013**
			Presenteeism: Avoiding Distractions			
IPQ	LMX	Low	**.0405**	**.0254**	**.0042**	**.1067**
Treatment	Professional	Medium	.0308	.0170	.0042	.0720
Control	Respect	High	.0211	.0168	-.0052	.0635
			Job Satisfaction			
IPQ	LMX	Low	**-.0420**	**.0249**	**-.1018**	**-.0031**
Treatment	Professional	Medium	-.0319	.0164	-.0692	-.0047
Control	Respect	High	-.0218	.0164	-.0597	.0062

Note. $N = 264$. JAS = Job accommodation; IPQ = Illness Perception Questionnaire; LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Bootstrapping analysis demonstrated that for a low level of leader empathy, LMX-Respect mediated the relationship between treatment control and three dimensions of job accommodation: modified physical workload (B = -.05, 95% CI [-.13; -.00]), modified work schedule (B = -.03, 95% CI [-.07; -.00]), and alternate duties (B = -.03, 95% CI [-.07; -.00]). With regards to resilience, LMX-Contribution mediated the relationship between treatment control and three dimensions of resilience, but only for the high level of leader empathy. The moderated mediation effect was found for trust in instincts (B = -.05, 95% CI [-.11; -.00]), positive acceptance to change (B = -.04, 95% CI [-.09; -.00]), and control (B = -.03, 95% CI [-.07; -.00]).

LMX-Respect mediated the relationship between personal control and avoiding distractions (B = .04, 95% CI [.00; .13]) and treatment control and avoiding distractions (B = .04, 95% CI [.00; .11]) for the low empathy level. LMX-Contribution mediated the relationship between treatment control and avoiding distractions but only for the high level of leader empathy (B = -.03, 95% CI [-.09; -.00]).

Moderated mediation had also been found for the outcome of job satisfaction. LMX-Respect mediated the relationship between treatment control and job satisfaction for the low empathy level (B = -.04, 95% CI [-.10; -.00]).

Chapter 5: Results (Supervisor Perspective, Study 2)

Sample Characteristics

Two hundred and ninety U.S. adult supervisors completed the survey online in exchange for payment through Amazon.com's Mechanical Turk. Of these 290, 69 were eliminated due to failure to pass screening questions[6], incomplete online survey[7], or duplicate responses, for an overall completion rate 76%.[8] We conducted a non-response bias test by comparing demographic variables, such as age, gender, organizational tenure, level of education, and tenure with employee with injury. We did not find any significant difference ($p < .05$) between the two groups of respondents.

Sample demographic profile is shown in Table 5.1. Supervisors were mostly in the age range of 25 to 45 years ($M = 34.3$; $SD = 10$) and 56% percent of participants were male. In terms of ethnicity, 84% were Caucasian, followed by African American (6%), Asian (4.5%), and others (5.5%). About 57% of participants were degree holders (bachelor's, master's, or doctorate), followed by diploma holders (22%), and high school (21%). The tenure with the current organization was mostly in the range of two to eight years ($M = 5.4$; $SD = 1.7$) and the average tenure with the injured employee was mostly in the range of two to six years ($M = 4.1$; $SD = 1.5$). Majority of supervisors represented middle (57%) and lower (32%) levels of management.

[6] Had not supervised an employee with musculoskeletal injury within the past 2 years and/or failed to describe in their own words an employee's injury.
[7] We did not consider questionnaires that were missing only several variables as incomplete.
[8] Qualtrics temporarily collects IP addresses. Duplicate IP addresses were removed from the data as a cautionary measure.

Table 5.1

Demographic Profile: Supervisor Perspective (Study 2)

Variable	*Frequency (percentage)*	*Variable*	*Frequency (percentage)*
Age (years)		*Position*	
25 or less	41 (18.6)	Top level management	24 (10.8)
26-30	53 (24.0)	Middle level management	127 (56.9)
31-35	48 (21.7)	Lower level management	72 (32.3)
36-40	31 (14.0)	*Frequency of Interaction with subordinate*	
41-45	15 (6.8)	1 Not at all	1 (.5)
46-50	12 (5.4)	2	0 (.0)
51-55	12 (5.4)	3	7 (3.2)
56-60	4 (1.8)	4	17 (7.7)
61+	5 (2.3)	5	61 (27.5)
Supervisor gender		6	49 (22.1)
Male	126 (56.8)	7 Always	87 (39.2)
Female	96 (43.2)	*Tenure with organization*	
Employee gender		Less than 6 month	1 (.4)
Male	118 (52.9)	6 months to 1 year	10 (4.5)
Female	105 (47.1)	1-2 years	24 (10.8)
Race		2-3 years	29 (13.0)
White/Anglo or European	186 (83.8)	3-5 years	56 (25.1)
Black/African	14 (6.3)	5-8 years	47 (21.1)
Asian, Pacific Islander	10 (4.5)	8-12 years	26 (11.7)
Bi-racial or multi-racial	11 (5.0)	12+ years	30 (13.5)
Other	1 (.5)	*Number of subordinates*	
Education		1	2 (.9)
High School or below	48 (21.5)	2-3	40 (18.0)
College/ Diploma	47 (21.1)	4-6	59 (26.6)
Bachelors	89 (39.9)	6-10	50 (22.5)
Masters	34 (15.2)	10-15	32 (14.4)
Doctorate	3 (1.3)	15 or more	39 (17.6)
In progress	2 (.9)		

Table (continued)

Variable	*Frequency (percentage)*	*Variable*	*Frequency (percentage)*
Tenure with injured employee		*Subordinate's injury occurred at work*	
Less than 6 months	8 (3.6)	Yes	116 (51.8)
6 months to 1 year	26 (11.7)	No	87 (38.8)
1-2 years	49 (22.0)	I don't know	21 (9.4)
		Personal experience with injury	
2-3 years	57 (25.6)		
3-5 years	49 (22.0)	Yes	93 (42.1)
5-8 years	21 (9.4)	No	128 (57.9)
		A relative is experiencing or has experienced a musculoskeletal injury	
8-12 years	7 (3.1)		
12+ years	6 (2.7)	Yes	93 (41.7)
		No	130 (58.3)

Psychometric Properties of the Measures

We investigated psychometric properties of all employed measures. Perceived disability, LMX, empathy, and job accommodation are multidimensional scales. We investigated dimensionality of focal supervisor reported variables and distinctiveness of the measures through CFA.

Dimensionality and distinctiveness of the measures. For the supervisor sample, we again tested the psychometric properties of the measures. Prior to conducting the CFA, we performed exploratory factor analysis with principal components extraction and Varimax rotation. We further excluded some items from CFA analyses based on factor loadings and cross-loadings criteria (see Appendix A2). Exclusion criteria were based on low factor loadings (less than .40) or high factor cross-loadings (higher than .30) (Leech et al., 2005).

For all multidimensional scales, we compared the original models with 1-factor models. The analyses showed the original models to have a better fit than the 1-

factor models (Table 5.2). All original scales, except for performance, were multi-dimensional. For perceived disability, LMX, empathy, and job accommodation, multidimensional scales had a significantly better fit than the corresponding 1-factor models.

Table 5.2

Dimensionality of the Measures and Construct Validity for the Supervisor Perspective (Study 2): Confirmatory Factor Analysis Results

Measurement Model	*Fit indices*					
	χ2	*df*	*IFI*	*CFI*	*GFI*	*RMSEA*
Perceived Disability						
5-factor	371.30	142	.9	.9	.85	.08
1-factor	2454.00	324	.37	.36	.47	.17
Empathy						
2-factor	14.50	8	.99	.99	.98	.06
1-factor	351.00	35	.68	.68	.72	.20
Leader-Member Exchange						
4-factor	200.60	48	.94	.94	.86	.11
1-factor	352.00	54	.88	.88	.78	.16
Performance						
1-factor	6.80	5	.99	.99	.99	.04
Job Accommodation						
5-factor	173.20	67	.93	.93	.9	.08
1-factor	1569.00	189	.48	.48	.55	.18
Hypothesized model						
17-factor	699.10	465	.95	.95	.85	.05
5-factor	2154.90	553	.66	.66	.64	.11
1-factor	3230.30	560	.43	.44	.52	.15

Note. *N* = 221. IFI = Incremental fit index; CFI = Comparative fit index; GFI = Goodness of fit index; RMSEA = Root square error of approximation.

To test construct validity, we compared the hypothesized 17-factor model[9] with 5-factor model (all scales are uni-dimensional) and 1-factor model. We followed previous research (Sass & Smith, 2006) and randomly combined scale items into parcels for each variable. Each variable had two parcels. The analysis showed satisfactory fit indices for the 17-factor model which had a significantly better fit than

[9] 17-factor model included the following constructs: five dimensions of perceived disability; four dimensions of LMX; two dimensions of leader empathy; five dimensions of JAS; one dimension of performance.

the 5-factor model and the 1-factor model (Table 5.2). Given the CFA results, we considered these variables as distinct constructs.

To calculate interdependence among scales, we employed the following steps: (1) converted Pearson correlations into Fisher's *z*-scores; (2) found average *z*-score among dimensions for each scale; and (3) transferred *z*-scores to Pearson correlations. Moderate interdependence among dimensions provided additional evidence of the distinctiveness of the measures (Table 5.3). As noted previously, the LMX scale showed relatively high interdependence. Although LMX dimensions were highly correlated, Liden and Maslyn (1998) noted that different dimensions contribute differently to the outcome variables. Thus we continued to analyze LMX as a multidimensional construct.

Table 5.3

Interdependence among Scales: Supervisor Perspective (Study 2)

Scale	*r*
Illness perception questionnaire	.17*
Basic empathy scale	.42**
Leader-member exchange	.81**
Job accommodation scale	.36**

Note. $N = 224$.

* $p < .05$; ** $p < .01$

Reliability for individual dimensions was assessed using Cronbach's alpha. As can be seen in Table 5.4, all constructs had acceptable Cronbach's alpha of .70 or greater (Hair et al., 2006).

Evidence against common method variance. We gathered several evidence against CMV. First, we conducted Harman's single-factor test and assessed the un-rotated solution involving all 56 items in an exploratory factor analysis. The analysis was constrained to 12 factors, explaining a total of 73% of the variance. The first factor accounted for 23% of the variance, providing evidence against CMV (Podsakoff et al., 2003). Second, we employed an additional test against CMV that

has been used for controlling the effects of method variance. We calculated correlations between predictor and criterion variables partialling out social desirability and negative affect (see Appendices B6 through B10). The differences between the partial correlations and zero-order correlations were not significant providing additional evidence against CMV (Spector et al., 2000). These analyses aligned with the CFA results (Table 5.2) that demonstrated the distinctiveness of employed measures.

Test of Hypotheses

Table 5.4 contains the means, standard deviations, correlations, and Cronbach's alpha of all variables for Study 2. As expected, LMX dimensions were positively related to job accommodation dimensions ranging from .13 (*ns*) to .39 ($p <$ .01). LMX dimensions had strong positive correlation with performance ranging from .56 ($p <$ .01) to .67 ($p <$ .01). Both affective and cognitive empathy were positively related to performance rating, $r = .27$ ($p <$ .01) and $r = .38$ ($p <$ .01), respectively. Almost all LMX dimensions had positive correlation with job accommodations. For instance, the correlation coefficients between LMX-Respect and job accommodation dimensions ranged from .15 ($p <$ .05) to .33 ($p <$ .01). Only two dimensions of perceived disability, timeline cyclical and consequences for a job, were positively associated with job accommodation. Correlation between timeline cyclical and job accommodation dimensions ranged from .07 (*ns*) to.18 ($p <$ .01). Correlation between consequences for a job and job accommodation was slightly stronger and ranged from .12 (*ns*) to .23 ($p <$ .01). Consequences for the job was also negatively related to performance rating ($r = -.22$, $p <$ .01). Surprisingly, LMX and perceived disability dimensions were positively related with correlation coefficients ranging from -.01 (*ns*) to .20 ($p <$ .01).

Table 5.4

Descriptive Statistics, Correlations, and Internal Reliability Coefficients: Supervisor Perspective (Study 2)

Variables	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1. Age		10.04	**--**[b]												
2. Sup gender	--[a]	--[a]	-04	--[a]											
3. Em/ee gender	--[a]	--[a]	-01	53**	--[a]										
4. W / H	--[a]	--[a]	07	04	-08	--[a]									
5. Communication	5.85	1.17	07	00	-02	03	--[b]								
6. Injury Exp	--[a]	--[a]	05	09	02	-13*	-17*	--[a]							
7. SD	4.68	1.20	-05	-01	-01	-05	18**	-00	**81**						
8. NA	2.20	1.14	-27**	06	07	-01	-26**	-02	-17*	**89**					
9. IPQ_1	4.42	1.39	08	-05	-11	14*	17*	-18**	09	-03	**90**				
10. IPQ_2	3.94	1.52	11	-07	-00	02	05	-05	13	02	30**	**91**			
11. IPQ_3	3.99	1.27	-06	-02	-05	-10	03	05	27**	03	23**	33**	**75**		
12. IPQ_4	3.65	1.37	-13*	-07	-10	09	-00	05	-08	-13	19**	-09	-09	**83**	
13. IPQ_5	3.72	1.32	01	-13	-06	11	01	-02	-01	-12	34**	04	-04	49**	**72**

Table (continued)

Variables	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
12. IPQ_4	3.65	1.37	-13*	-07	-10	09	-00	05	-08	-13	19**	-09	-09	**83**	
13. IPQ_5	3.72	1.32	01	-13	-06	11	01	-02	-01	-12	34**	04	-04	49**	**72**
14. EM_A	3.75	.94	12	-18**	-15*	-06	12	-01	11	-21**	06	02	05	09	08
15. EM_C	3.98	.80	11	-30**	-21**	-02	34**	-11	33**	-25**	10	02	12	-01	-12
16. LMX_A	5.52	1.34	10	-14*	-15*	07	43**	-16*	33**	-27**	21**	08	-01	16*	09
17. LMX_L	5.30	1.25	14*	-06	-04	07	38**	-14*	29**	-26**	19**	14*	01	20**	12
18. LMX_C	5.25	1.36	12	-14*	-10	05	35**	-18**	33**	-25**	18**	17*	02	18**	11
19. LMX_P	5.60	1.28	18**	-14*	-10	07	41**	-19**	32**	-33**	20**	17*	-01	16*	11
20. JAS_1	4.70	1.91	00	-07	02	-17*	08	01	14*	-08	08	08	12	-01	-06
21. JAS_2	4.42	1.77	09	-15*	-13	-03	07	07	13	-08	10	18**	16*	08	-05
22. JAS_3	3.50	1.92	-01	-03	-15*	-06	-00	05	25**	09	-05	13	23**	10	-07
23. JAS_4	3.74	1.66	-07	05	05	-12	-01	13*	26**	04	-06	11	20**	04	-10
24. JAS_5	5.03	1.73	,07	-19**	-13*	-01	24**	-102	27**	-14*	-08	07	14*	-05	-19**
25. PERF	5.61	1.16	13*	-11	-11	14*	45**	-23**	19**	-31**	16*	05	-22**	04	03

Table (continued)

Variables	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*
14. EM_A	**78**											
15. EM_C	42**	**80**										
16. LMX_A	25**	40**	**92**									
17. LMX_L	22**	36**	79**	**83**								
18. LMX_C	24**	37**	73**	80**	**88**							
19. LMX_P	27**	42**	82**	83**	85**	**91**						
20. JAS_1	04	12	23**	17*	16*	22**	**88**					
21. JAS_2	01	11	13	16*	26**	22**	39**	**83**				
22. JAS_3	-06	-01	21**	20**	16*	19**	35**	37**	**78**			
23. JAS_4	-06	02	13	15*	10	15*	23**	29**	54**	**73**		
24. JAS_5	07	35**	31**	27**	25**	33**	43**	28**	38**	30**	**84**	
25. PERF	27**	38**	59**	56**	66**	68**	07	01	-06	-08	21**	**92**

Note. *N* varies from 221 to 224. Diagonal entries in bold indicate coefficients alpha. Decimals points are omitted from correlation coefficients and Cronbach's alpha coefficients. [a] Single-item categorical measure (Gender: 0 = Female; 1 = Male. Injury occurred at work: 0 = Yes; 1 = No. A relative is experiencing or has experiences a musculoskeletal injury: 0 = Yes; 1 = No). [b] Single-item ration measure.

Communication = Frequency of communication with a subordinate; EM_A = Affective Empathy; EM_C = Cognitive Empathy; Em/ee gender = Employee gender; Injury Exp = A relative is experiencing or has experienced a musculoskeletal injury; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical; IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; NA = Negative affect; PERF = Performance; SD = Social desirability; Sup gender = Supervisor gender; W / H = Did injury occur at work.

* $p < .05$; ** $p < .01$

Hypothesis 1. Hypothesis 1 suggested that perceived disability severity was negatively associated with LMX quality. As can be seen in Table 5.5, controlling for the age, gender, and frequency of interaction with a subordinate, perceived disability explained additional variance in LMX quality ($\Delta R^2 = .06$, $p < .01$). However, two dimensions of perceived disability, personal control and timeline acute/chronic, were positively rather than negatively related to LMX quality. Timeline acute/chronic was positively related to LMX-Contribution ($\beta = .15$, $p < .05$) and LMX-Respect ($\beta = .14$, $p < .05$). Personal control was positively related to all dimensions of LMX: LMX-Affect ($\beta = .16$, $p < .05$), LMX-Loyalty ($\beta = .22$, $p < .01$), LMX-Contribution ($\beta = .21$, $p < .01$), and LMX-Respect ($\beta = .19$, $p < .01$).

Table 5.5

Regression Analysis of Perceived Disability on Leader-Member Exchange: Supervisor Perspective (Study 2)

Independent Variable	*Dependent Variable*			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*
	β	*β*	*β*	*β*
Step 1	($R^2 = .20$**)	($R^2 = .15$**)	($R^2 = .16$**)	($R^2 = .20$**)
Age	.06	.11	.09	.15*
	(-.01; .03)	(-.00; .03)	(-.01; .03)	(.00; .03)
Supervisor gender[a]	-.09	-.05	-.13	-.13
	(-.64; .13)	(-.49; .25)	(-.76; .05)	(-.69; .05)
Employee gender[a]	-.07	.01	-.02	-.01
	(-.58; .19)	(-.34; .40)	(-.45; .34)	(-.39;. 34)
Frequency of interaction with subordinate[b]	.41**	.37**	.35**	.39**
	(.34; .63)	(.26; .54)	(.27;. 57)	(.30; .57)
Step 2	$\Delta R^2 = .04$	$\Delta R^2 = .06$**	$\Delta R^2 = .06$**	$\Delta R^2 = .06$**
IPQ: Timeline acute/chronic	.10	.07	.03	.07
	(-.04; .24)	(-.07; .19)	(-.11; .17)	(-.06; .20)
IPQ: Timeline cyclical	.04	.11	.15*	.14*
	(-.08; .16)	(-.02; .20)	(.01; .26)	(.01; .23)
IPQ: Consequences	-.05	-.03	-.04	-.06
	(-.19; .09)	(-.15; .11)	(-.19; .10)	(-.19; .07)
IPQ: Personal control	.16*	.22**	.21**	.19**
	(.02; .30)	(.07; .33)	(.07; .36)	(.05; .31)
IPQ: Treatment control	-.04	-.03	-.03	-.04
	(-.19; .11)	(-.17; .12)	(-.18; .13)	(-.18; .10)

Note. $N = 224$. [a] Single-item categorical measure (0 = Female; 1 = Male); [b] Single-item ratio measure; IPQ = Illness perception questionnaire. 95% confidence intervals are presented in parentheses.
* $p < .05$; ** $p < .01$

Hypothesis 2. Hypothesis 2 suggested that LMX quality was positively related to job accommodation and performance. Table 5.6 illustrates the results of regression analysis of LMX dimensions on job accommodation and performance rating. With regards to job accommodation, the LMX-Respect was positively related to arranged work assistance ($\beta = .32$, $p < .05$). Two dimensions of LMX, LMX-Contribution ($\beta = .38$, $p < .01$) and LMX-Respect ($\beta = .42$, $p < .01$), were associated with performance. The results provided partial support for hypothesis 2.

Hypothesis 3. Hypothesis 3 stated that leader empathy moderated the relationship between perceived disability and LMX quality. To test the moderation hypothesis, we performed a four-step hierarchical regression analysis.

Predictor variables were converted to *z*-scores and product terms between perceived disability and empathy were created. Table 5.7 and 5.8 contain a summary of regression analyses results for affective and cognitive empathy, respectively. For the moderation hypothesis to be confirmed, an interaction term had to be significant. As can be seen in both tables, there were several significant interactions: between treatment control and affective empathy (Table 5.7) and between consequences and cognitive empathy (Table 5.8). Thus the moderation hypothesis was partially supported. However, we should note that in both cases the R^2 change was not significant.

Table 5.6

Regression Analysis of LMX on Job Accommodation and Performance: Supervisor Perspective (Study 2)

	Dependent Variable					
	JAS: Modified Physical Workload	*JAS: Modified Work Environment*	*JAS: Modified Work Schedule*	*JAS: Alternate Duties*	*JAS: Arranged Work Assistance*	*Performance*
Independent Variable	*β*	*β*	*β*	*β*	*β*	*β*
Step 1	(R^2 = .02)	(R^2 = .04)	(R^2 = .05)	(R^2 = .02)	(R^2 = .12**)	(R^2 = .24**)
Age	--	--	--	--	--	.11 (-.00;. .03)
Supervisor gender	-.07 (-.91; .32)	-.11 (-.97; .20)	.11 (-.23; 1.04)	.09 (-.25; 86)	-.15 (-1.06; .01)	--
Employee gender	.00 (-.63; .60)	-.09 (-.90; .28)	-.25** (-1.16; -.33)	.00 (-.55; .55)	-.07 (-.75; .31)	--
Work/home	.06 (-.28; .76)	.08 (-.79; .21)	-.03 (-.64; .43)	-.11 (-.83; .11)	.13 (-.01; .90)	.16* (.15; .73)
Frequency of interaction	.10 (-.07; .38)	.09 (-.08; .35)	-.03 (-.28; .18)	.02 (-.17; .22)	.23** (.15; .54)	.41** (.31; .57)
Experience with injury	--	--	--	--	--	-.14* (-.63; .03)
Step 2	ΔR^2 = .05*	ΔR^2 = .06*	ΔR^2 = .07**	ΔR^2 = .05*	ΔR^2 = .05*	ΔR^2 = .34**
LMX Affect	.22 (-.06; .67)	-.09 (-.47; .23)	.15 (-.16; .58)	.14 (-.15; .50)	.07 (-.23; .40)	.03 (-.13; .18)
LMX Loyalty	-.13 (-.60; .23)	.03 (-.35; .44)	.11 (-.25; .59)	.08 (-.27; .48)	-.05 (-.42; .30)	-.18 (-.35; .01)
LMX Professional respect	-.09 (-.49; .26)	.21 (-.09; .63)	-.04 (-.44; .33)	-.16 (-.53; .15)	-.11 (-.46; .20)	.38** (.16; .49)
LMX Contribution	.22 (-.15; .79)	.11 (-.30; .60)	.09 (-.34; .62)	.17 (-.21; .64)	.32* (.00; .82)	.42** (.18; .59)

Note. N = 224. Experience with injury (0 = Yes; 1 = No); Gender: 0 = Female, 1 = Male; LMX = Leader-member exchange; Work/home = Injury occurred at work (0 = Yes; 1 = No). 95% confidence intervals are presented in parentheses.

* $p < .05$; ** $p < .01$

Table 5.7

Regression Analysis of Perceived Disability X Affective Empathy Interaction on Leader-Member Exchange: Supervisor Perspective (Study 2)

Independent Variable	*Dependent Variable*			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*
	β	*β*	*β*	*β*
Step 1	(R^2 = .20**)	(R^2 = .15**)	(R^2 = .16**)	(R^2 = .20**)
Age	.06	.11	.09	.15*
Supervisor gender[a]	-.09	-.05	-.13	-.13
Employee gender[a]	-.07	.01	-.02	-.01
Frequency of interaction with subordinate[b]	.41**	.37**	.35**	.39**
Step 2	ΔR^2 = .04	ΔR^2 = .06**	ΔR^2 = .06**	ΔR^2 = .06**
IPQ: Timeline acute/chronic (A)	.10	.07	.03	.07
IPQ: Timeline cyclical (B)	.04	.11	.15*	.14*
IPQ: Consequences (C)	-.05	-.03	-.04	-.06
IPQ: Personal control (D)	.16*	.22**	.21**	.19**
IPQ: Treatment control (E)	-.04	-.03	-.03	-.04
Step 3	ΔR^2 = .03**	ΔR^2 = .02*	ΔR^2 = .02*	ΔR^2 = .03
Affective empathy (F)	.17** (.07; .42)	.15* (.03; .36)	.16* (.05; .41)	.18** (.08; .41)
Step 4	ΔR^2 = .02	ΔR^2 = .00	ΔR^2 = .01	ΔR^2 = .02
A * F	-.02 (-.20; .16)	-.01 (-.18; .16)	.05 (-.12; .25)	.01 (-.15; .18)
B * F	.12 (-.03; .31)	.04 (-.12; .20)	.01 (-.17; .19)	.10 (-.05; .27)
C * F	-.04 (-.20; .12)	-.04 (-.20; .11)	-.06 (-.24; .10)	-.02 (-.17; .13)
D * F	.10 (-.05; .28)	.02 (-.14; .18)	.10 (-.05; .30)	.08 (-.06; .25)
E * F	-.13 (-.37; .03)	-.06 (-.26; .12)	-.12 (-.37; .05)	-.15* (-.37; -.00)

Note. N = 224. [a] Single-item categorical measure (0 = Female; 1 = Male); [b] Single-item ratio measure; IPQ = Illness perception questionnaire; LMX = Leader-member exchange. 95% confidence intervals are presented in parentheses. Confidence intervals for demographic variables and IPQ have been shown in Table 5.5.
* $p < .05$; ** $p < .01$

We conducted a simple slope analysis to display significant interaction effects (Aiken & West, 1991). We determined simple regression lines at low and high empathy levels (± 1 SD from the mean). Figures 5.1 illustrates significant interaction effect between treatment control and affective empathy. The interaction between the

perceived disability treatment control dimension and affective empathy suggested that when leader affective empathy was low treatment control had a strong positive association with LMX-Respect. When leader affective empathy was high, treatment control had significantly weaker positive association with LMX-Respect. The main effect suggested that supervisors who had high empathy level reported higher level of LMX-Respect regardless of treatment control.

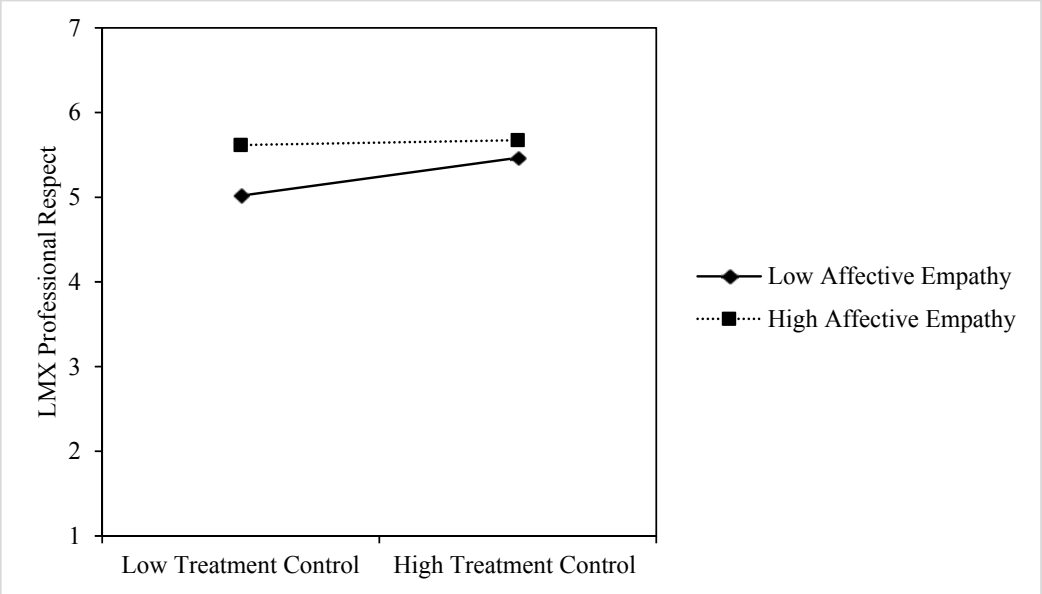

Figure 5.1. Treatment control by affective empathy interaction on LMX-Professional Respect (Study 2).

We also found one significant interaction between perceived disability dimensions and cognitive empathy on LMX. Figures 5.2 illustrates significant interaction effect. The interaction between the perceived disability consequences dimension and cognitive empathy suggested that when leader cognitive empathy was high consequences had slightly less negative association with LMX-Respect than when leader cognitive empathy was low.

Table 5.8

Regression Analysis of Perceived Disability X Cognitive Empathy Interaction on Leader-Member Exchange: Supervisor Perspective (Study 2)

Independent Variable	*Dependent Variable*			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*
	β	*β*	*β*	*β*
Step 1	(R^2 = .20**)	(R^2 = .15**)	(R^2 = .16**)	(R^2 = .20**)
Age	.06	.11	.09	.15*
Supervisor gender[a]	-.09	-.05	-.13	-.12
Employee gender[a]	-.07	.01	-.02	-.01
Frequency of interaction with subordinate[b]	.41**	.37**	.35**	.39**
Step 2	ΔR^2 = .04	ΔR^2 = .06**	ΔR^2 = .06**	ΔR^2 = .06**
IPQ: Timeline acute/chronic (A)	.10	.07	.03	.07
IPQ: Timeline cyclical (B)	.04	.11	.15*	.14*
IPQ: Consequences (C)	-.05	-.03	-.04	-.06
IPQ: Personal control (D)	.16*	.22**	.21**	.19**
IPQ: Treatment control (E)	-.04	-.03	-.03	-.04
Step 3	ΔR^2 = .07**	ΔR^2 = .07**	ΔR^2 = .07**	ΔR^2 = .08**
Cognitive empathy (F)	.30** (.29; .74)	.30** (.27; .70)	.31** (.30; .77)	.33** (.33; .75)
Step 4	ΔR^2 = .03	ΔR^2 = .01	ΔR^2 = .02	ΔR^2 = .03
A * F	-.07 (-.27; .08)	.00 (-.17; .17)	.08 (-.07; .30)	.05 (-.10; .23)
B * F	-.04 (-.23; .14)	-.08 (-.27; .08)	-.04 (-.24; .14)	-.11 (-.30; .04)
C * F	.15* (.02; .34)	.13 (-.01; .30)	.07 (-.08; .26)	.18** (.05; .35)
D * F	.04 (-.11; .21)	.02 (-.13; .18)	-.03 (-.18; .15)	.10 (-.04; .26)
E * F	-.10 (-.32; .04)	-.05 (-.24; .11)	-.10 (-.32;. 06)	-.10 (-.30; .05)

Note. N = 224. [a] Single-item categorical measure (0 = Female; 1 = Male); [b] Single-item ratio measure; IPQ = Illness perception questionnaire; LMX = Leader-member exchange. 95% confidence intervals are presented in parentheses. Confidence intervals for demographic variables and IPQ have been shown in Table 5.5.

* p < .05; ** p < .01

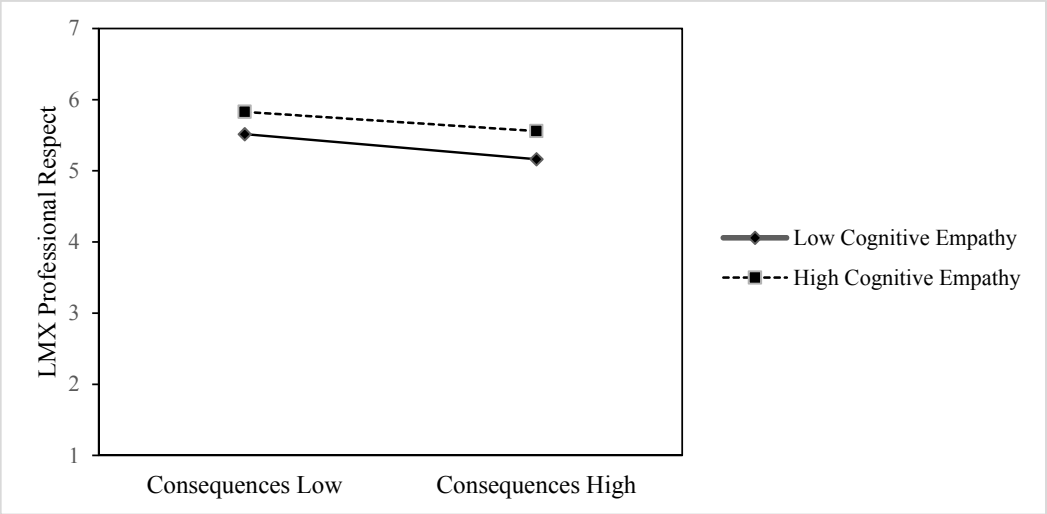

Figure 5.2. Consequences by cognitive empathy interaction on LMX Professional Respect (Study 2).

Hypothesis 4. Following Baron and Kenny's (1986) recommendation, we conducted a hierarchical multiple regression analysis to examine whether LMX mediated the relationships between perceived disability severity and job accommodation and performance. Hypothesis 4 suggested that the indirect effect of perceived disability on the outcomes became insignificant when LMX dimensions were considered. Appendices C5 and C6 contains the results of mediation analyses. Step 1 shows separate regressions for independent and mediator variables controlling for relevant demographic variables. At Step 2, all variables were included simultaneously. Prior to making conclusions regarding mediation effects, we ensured that: (1) disability dimensions were related to LMX dimensions; (2) LMX dimensions were related to the outcomes; and (3) disability dimensions were associated with the outcomes. For the mediation effect to be significant, the relationship between predictor and outcome variables had to be greatly reduced (partial mediation) or become non-significant (full mediation). The results of hierarchical regression analysis did not support the mediation hypothesis.

Hypothesis 5. Hypothesis 5 suggested that leader empathy moderated the indirect effect of perceived disability severity on the outcomes through LMX quality. The hypothesis received partial support. We followed Hayes' (2013) recommendations to identify significance of conditional indirect effects. Results of the moderated mediation analyses are presented in Table 5.9 and 5.10 (significant indirect effects are in bold). Before testing conditional indirect effects, we ensured that the following conditions were met: (a) perceived disability was related to LMX; (b) LMX was related to the outcome; and (c) perceived disability was related to the outcome.

Table 5.9

Bootstraps for the Moderated Mediation of Perceived Disability (Timeline Cyclical) and Leader Empathy on Job Accommodation through Leader-Member Exchange: Supervisor Perspective (Study 2)

Mediator	*Moderator*	*JAS: Modified Work Environment*			
		Estimate of the indirect effect	*Standard error*	*LLCI*	*ULCI*
	Affective Empathy				
LMX Loyalty	Low	-.0269	.0289	-.1160	.0092
	Medium	-.0242	.0238	-.0954	.0060
	High	-.0214	.0259	-.1055	.0070
LMX Contribution	Low	.0596	.0437	-.0003	.1803
	Medium	.0529	.0346	.0040	.1505
	High	.0461	.0370	-.0029	.1534
LMX Professional respect	Low	.0114	.0267	-.0149	.1089
	Medium	.0176	.0305	-.0250	.1033
	High	.0239	.0398	-.0358	.1301
	Cognitive Empathy				
LMX Loyalty	Low	-.0280	.0355	-.1438	.0127
	Medium	-.0245	.0247	-.0939	.0084
	High	-.0211	.0230	-.1011	.0054
LMX Contribution	Low	.0535	.0489	-.0070	.1989
	Medium	.0523	.0351	.0025	.1468
	High	**.0511**	**.0336**	**.0036**	**.1436**
LMX Professional respect	Low	.0183	.0447	-.0289	.1670
	Medium	.0180	.0332	-.0283	.1071
	High	.0176	.0284	-.0239	.0985

Note. $N = 224$. LLCI = Low level confidence interval; ULCI = Upper level confidence interval. Significant indirect effects are in bold

Bootstrapping analysis demonstrated that for a high level of cognitive empathy LMX-Contribution mediated the relationship between timeline cyclical and modified work environment (B = .05, 95% CI [.00; .14]).

Table 5.10

Bootstraps for the Moderated Mediation of Perceived Disability (Timeline Acute / Chronical) and Leader Empathy on Performance through Leader-Member Exchange: Supervisor Perspective (Study 2)

Mediator	*Moderator*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
	Affective Empathy				
LMX Affect	Low	.0170	.0215	-.0124	.0789
	Medium	.0172	.0200	-.0162	.0648
	High	.0174	.0209	-.0162	.0690
LMX Loyalty	Low	-.0194	.0198	-.0864	.0030
	Medium	-.0201	.0168	-.0676	.0021
	High	-.0209	.0185	-.0755	.0031
LMX Contribution	Low	.0311	.0341	-.0182	.1199
	Medium	.0432	.0282	.0047	.1217
	High	**.0553**	**.0360**	**.0075**	**.1535**
LMX Professional respect	Low	.0547	.0404	-.0037	.1567
	Medium	.0622	.0343	.0107	.1445
	High	**.0698**	**.0418**	**.0083**	**.1670**
	Cognitive Empathy				
LMX Affect	Low	.0214	.0265	-.0142	.0954
	Medium	.0167	.0196	-.0142	.0658
	High	.0120	.0155	-.0095	.0557
LMX Loyalty	Low	-.0145	.0201	-.0790	.0079
	Medium	-.0169	.0155	-.0659	.0020
	High	-.0192	.0179	-.0702	.0024
LMX Contribution	Low	-.0018	.0434	-.1001	.0806
	Medium	.0284	.0270	-.0108	.0984
	High	**.0586**	**.0333**	**.0118**	**.1454**
LMX Professional respect	Low	.0294	.0533	-.0602	.1561
	Medium	.0482	.0348	-.0021	.1344
	High	**.0670**	**.0340**	**.0162**	**.1510**

Note. *N* = 224. LLCI = Low level confidence interval; ULCI = Upper level confidence interval.

For a high level of affective empathy, LMX-Contribution (B = .05, 95% CI [.01; .15]) and LMX-Respect (B = .07, 95% CI [.01; .17]) mediated the relationship

between timeline acute/chronical and performance (Table 5.6). LMX-Contribution (B = .06, 95% CI [.01; .15]) and LMX-Respect (B = .07, 95% CI [.02; .15]) also mediated the relationship between timeline acute/chronical and performance for high level of cognitive empathy. Thus Hypothesis 5 received partial support.

Chapter 6: Discussion

The fundamental purpose of the two studies was to investigate the moderating role of empathy and mediating role of LMX on the relationship between perceived disability severity and work outcomes. Overall, the results partially supported theoretical predictions for a moderated mediation model.

Recap of Major Findings

We examined the relationships between perceived disability severity and LMX quality from two perspectives, employees with musculoskeletal injuries and supervisors who have had injured employees in the past two years. Table 6.1 provides a summary of findings for both perspectives.

Table 6.1

Overview of Tested Hypotheses

Hypothesis	*Employee Perspective*	*Supervisor Perspective*
H1: The level of perceived disability is negatively associated with LMX quality	Supported	Not Supported[10]
H2a: LMX quality is positively associated with job accommodation	Supported	Supported
H2b: LMX quality is positively associated with resilience	Supported	N/A
H2c: LMX quality is positively associated with job satisfaction	Supported	N/A
H2d: LMX quality is positively associated with performance	N/A	Supported
H2e: LMX quality is negatively associated with presenteeism.	Supported	N/A
H3: Leader empathy moderates the relationship between supervisors' perceived disability severity and LMX quality	Supported	Supported
H4a: LMX mediates the relationship between perceived disability severity and resilience	Supported	N/A
H4b: LMX mediates the relationship between perceived disability severity and job accommodation,	Supported	Not Supported
H4c: LMX mediates the relationship between perceived disability severity and presenteeism	Not Supported	N/A
H4d: LMX mediates the relationship between perceived disability severity and job satisfaction	Supported	N/A

[10] For supervisor perspective, the level of perceived disability was positively related to LMX quality

Table (continued)

H4e: LMX mediates the relationship between perceived disability severity and performance	N/A	Not Supported
H5a$_1$: When a leader has low empathy, there is a negative indirect effect of perceived disability severity through LMX quality on resilience	Not Supported	N/A
H5a$_2$: When a leader has low empathy, there is a negative indirect effect of perceived disability severity through LMX quality on job satisfaction	Supported	N/A
H5a$_3$: When a leader has low empathy, there is a negative indirect effect of perceived disability severity through LMX quality on performance	N/A	Not Supported
H5a$_4$: When a leader has low empathy, there is a negative indirect effect of perceived disability severity through LMX quality on job accommodation	Supported	Not Supported
H5a$_5$: When a leader has low empathy, there is a positive indirect effect of perceived disability severity through LMX quality on presenteeism.	Supported	N/A
H5b$_1$: When a leader has high empathy, the negative indirect effect of perceived disability through LMX quality on job accommodation is no longer significant or weakens	Not Supported	Not Supported
H5b$_2$: When a leader has high empathy, the negative indirect effect of perceived disability through LMX quality on job satisfaction is no longer significant or weakens	Not Supported	N/A
H5b$_3$: When a leader has high empathy, the negative indirect effect of perceived disability through LMX quality on performance is no longer significant or weakens	N/A	Supported
H5b$_4$: When a leader has high empathy, the negative indirect effect of perceived disability through LMX quality on resilience is no longer significant or weakens	Supported	N/A
H5b$_5$: When a leader has high empathy, the positive indirect effect of perceived disability severity through LMX quality on presenteeism is no longer significant or weakens	Supported	N/A

Note. N/A = Not applicable

From the employee perspective, the results showed that employees with higher levels of perceived disability demonstrated lower supervisor-subordinate relationship quality. The results are aligned with research that has showed the negative effect of disability on LMX (Colella & Varma, 2001; Dwertmann & Boehm, 2016). From the supervisor perspective, we found a positive association between disability and LMX quality. Although these results contradict our initial hypothesis, the

phenomenon has a logical explanation. As cross-sectional studies do not test causality, there is the possibility of reverse causality. Supervisors, who have high LMX quality with their subordinates, might be more aware of their subordinates' injuries and therefore behave in a way that is more supportive in the case of serious injury. On the other hand, the supervisor who perceives a subordinate's injuries as mild, might think the subordinate is exaggerating the severity of his or her condition. This will be even more salient in the case of perceived disability incongruence, when the subordinate perceives the injury as severe and the supervisor thinks the subordinate's injury is mild. High LMX quality relationships are built on mutual trust (Liden & Maslyn, 1998). Musculoskeletal injury often is not visible, as a result, the supervisor often learns about the severity of the injury from the subordinate. Thus trust, a component of high quality LMX, might facilitate the process of sharing information about one's injury, explaining the positive relationship between disability and LMX from the supervisor perspective. Lack of mutual trust might lead to perceived disability incongruence, which in turn would result in lack of understanding, mistrust, and inadequate accommodation.

Dulebohn et al. (2012) showed that LMX is associated with numerous attitudinal and behavioral outcomes. We examined four outcomes from the employee perspective (Study 1) and two outcomes from the supervisor perspective (Study 2). The results showed that different dimensions of LMX are associated with different outcomes. This aligns with previous research on LMX (Liden & Maslyn, 1998; Maslyn & Uhl Bien, 2001; Schriesheim et al., 1992). From the employee perspective, LMX-Loyalty was positively associated with job accommodation, LMX-Contribution was positively related to resilience, and LMX-Affect was positively associated with job satisfaction. LMX-Respect was negatively associated with one of two dimensions

of presenteeism (avoiding distractions). From the supervisor perspective, we examined two outcomes—job accommodation and employee performance rating. The results demonstrated that two dimensions of LMX quality, LMX-Contribution and LMX-Respect, are positively associated with performance ratings. Surprisingly, we found only one positive relationship between LMX and job accommodation dimensions from the supervisor perspective. The results demonstrated that LMX-Respect was positively associated with arranged work assistance (job accommodation dimension). This discrepancy between employee and supervisor perspectives of the relationship between LMX and job accommodation might be due to the fact that employees perceive supervisors as a proxy of accommodation decisions; while supervisors might not feel full responsibility for the provided job accommodation (i.e. existence of company policy regarding job accommodation).

The results support the notion that LMX dimensions differentially predict various criterion variables (Greguras & Ford, 2006). As noted earlier, LMX quality is grounded in social exchange theory, which implies a reciprocity process and exchange of a variety of material and nonmaterial goods (Blau, 1969). For instance, one subordinate might be willing to put extra hours into a project (LMX-Contribution), while another is a pleasant companion (LMX-Affect). Both situations can result in high quality LMX; however, consequences (outcomes) will be different. Thus, considering antecedents and consequences of leader-member relationships, it is important to take into account the different nature of reciprocity (currencies). Our findings have shown that different components of LMX quality are important for different outcomes. The expression of public support (loyalty) and perception of work reputation (professional respect) are crucial for provided job accommodation. Whereas, perception of the amount and quality of work-oriented activities

(contribution) plays an important role in resilience and performance rating. Employees who have more affection for their supervisors (affect) report higher levels of job satisfaction. Finally, high perception of work reputation (professional respect) can lead to presenteeism. One of the possible explanations is that employees with disabilities do not want to risk their reputation and, as a result, continue attending work while experiencing illness or injury.

Overall, for both perspectives, disability severity is positively associated with job accommodation. The positive association between perceived disability and job accommodation can be explained by the fact that the more severe the injury the more likely an employee will require accommodations. From the employee perspective, disability demonstrated a negative association with resilience and a positive association with presenteeism. In other words, employees with higher disability severity are more likely to have lower levels of resilience and are more likely to be engaged in presenteeism. These results aligned with previous research that has shown the positive association between disability and engagement in presenteeism (Goetzel, Long, Ozminkowski, Hawkins, Wang, & Lynch, 2004). From the supervisor perspective, the results showed that employees whose injuries had more work consequences received lower performance ratings. These findings are consistent with previous research on the effect of disability on performance evaluation (Colella, Denisi, & Varma, 1998; Lynch & Finkelstein, 2015).

The moderation hypothesis was partially supported. From the employee perspective, we found two significant interaction effects between perceived disability severity and leader empathy on LMX quality. Both interaction effects demonstrated that for those employees whose leaders were high on empathy the negative association between perceived disability and LMX quality became significantly weaker. In other

words, the relationship between perceived disability severity and LMX quality is contingent upon the perception of leader empathy. The encouragement and social support from supervisors with high levels of empathy might help mitigate the negative association between perceived disability severity and LMX relationships. From the supervisor perspective, we found that for supervisors with high levels of affective empathy, the association between LMX-Respect and treatment control is much stronger than for leaders with low levels of affective empathy. As we noted earlier for the supervisor perspective, the positive association between perceived disability and LMX quality likely reflects the awareness about the subordinate's injury. For supervisors who have less ability to recognize and understand the feelings and emotions of others (low empathy level), LMX quality becomes essential for the awareness about subordinate's injury. However, when empathy is high, supervisors even with low LMX quality are able to recognize the subordinate's injury. Supervisors with high empathy levels have on average higher LMX-Respect scores regardless of the perceived disability treatment control dimension. For the perceived disability consequences dimension, high level of cognitive empathy helps to mitigate the negative association between consequences and LMX-Respect. These findings highlight the importance of leader empathy in the relationship between perceived disability severity and LMX quality. A supervisor's ability to understand the emotions and feelings of his or her employee helps to mitigate the negative effect of perceived disability severity.

From the employee perspective, LMX operated as a mediator through which perceived disability severity affected job accommodation, resilience, and job satisfaction. These findings are consistent with previous research that demonstrated LMX quality could be essential in determining work outcomes for employees (Brower

et al., 2000; Dulebohn et al., 2012). Our findings highlight the importance of supervisor-subordinate relationships in facilitating job accommodation, resilience, and job satisfaction for employees. Supervisor-subordinate relationships are essential for the employee outcomes. However, no significant mediation effects were found from the supervisor perspective. Our initial hypothesis stated that perceived disability severity was negatively associated with LMX quality. On the contrary, the analysis revealed positive relationships between perceived disability severity and supervisor-subordinate relationships. As stated earlier, LMX quality might affect awareness about a subordinates' disability resulting in a situation where LMX is positively associated with perceived disability severity, and perceived disability would be in turn related to job accommodation and performance.

From the employee perspective, Study 1 demonstrated the mediation model worked for some levels of empathy. In particular, we found that low levels of supervisor empathy weakened the positive association between perceived disability and job accommodation through LMX-Respect. With regards to resilience, high levels of supervisor empathy enhanced the negative association between perceived disability and resilience through LMX-Contribution. We also found that a low level of supervisor empathy enhanced the positive association between disability and avoiding distractions through LMX-Respect. Finally, a low level of leader empathy enhanced the negative relationship between perceived disability and job satisfaction through LMX-Respect. For the supervisor, the mediation model worked for high levels of affective and cognitive empathy. High levels of leader empathy enhanced positive relationships between perceived disability severity and job accommodation through two dimensions of LMX: LMX-Contribution and LMX-Respect. However, we did not

find any indirect mediation effects between perceived disability and performance ratings.

Implications for Theory

This research incorporates two different research streams: LMX and disability management. In doing so, the findings of this research have important theoretical contributions for both areas. First, numerous studies have been conducted on antecedents and consequences of LMX quality (e.g., Cogliser et al., 2009; Gerstner & Day, 1997; Dulebohn et al., 2012). However, limited attention has been paid to the role of LMX quality in a disability context. To our knowledge, there have been no empirical studies of the relationship between LMX and job accommodation, resilience, and presenteeism. This research examined the above-mentioned outcomes providing strong empirical support for these relationships and extending both LMX and disability management research.

Second, we conducted two separate studies investigating the proposed model from two perspectives--employees with musculoskeletal injuries and supervisors who have employees with musculoskeletal injuries. The results of both studies highlight the similarities and differences of the two perspectives. In summary, both studies showed that leader empathy has the ability to moderate the relationships between perceived disability and LMX. Moreover, LMX is positively associated with job accommodation. With regards to differences between the two perspectives, we found that the association between perceived disability and LMX quality is contingent on the perspective.

Third, disability has often been examined as a dichotomous or a categorical variable (e.g., Capella, 2003; Colella & Varma, 2001; Fulton & Sabornie, 1994). This research contributes to the current body of literature by examining perceived disability

severity as a continuum and employing different dimensions of injury perception. The results our research have shown and supported the conclusion that disability is not all-or-nothing phenomenon (Pledger, 2003). Disability can be described as different places on a continuum ranging from low to high disability perception. By examining perception of disability using a regression-based approach, we have shown that a degree of disability, rather than disabled/non-disabled status, is related to various correlates.

Finally, the current findings add to both LMX and disability management areas by examining the mediating role of LMX quality and moderating role of leader empathy.

Implications for Practice

Our findings have several important practical implications. Understanding antecedents and consequences of LMX quality is crucial for both supervisors and subordinates. Our research showed that high quality LMX was associated with better job accommodation, lower presenteeism levels, and higher performance ratings. Thus employees may want to engage in activities that positively affect the supervisor-subordinate relationships. For instance, Dulebohn et al. (2012) showed that ingratiation and self-promotion had a strong positive association with LMX quality, while harsh influence tactics (e.g. use of force, demands, use of pressure by obtaining the support of co-workers, upward appeals) were negatively associated with LMX. Colella and Varma (2001) demonstrated that subordinates with disabilities could mitigate negative bias associated with disability by engaging in ingratiation. Such behaviors as expression of opinion similarity, engagement in more frequent interactions, offering help and support, and taking initiative have also been shown to be positively associated with LMX quality (Wayne & Liden, 1995). Hence, employees

with disabilities can gain support from their supervisors by engaging in certain types of behaviors that are positively related to high LMX quality and avoiding behaviors that are negatively related to LMX quality. Research has shown that LMX relationships form relatively quickly (Liden et al., 1993) and that "the way a disabled employee is perceived by managers and peers is often affected by behaviours that occurred before any disability was known to exist." (Williams-Whitt & Taras, 2010, p. 550) Hence, employees might consider engaging in the above-mentioned behaviors in the early stages of their relationships with supervisors.

Musculoskeletal injuries are often referred to as an invisible disability which means that supervisors may not be aware of the severity of the employees' disability. The employee and supervisor may also have very different perspectives on disability severity. This can lead to an absence of or inadequate job accommodation. In turn, inadequate job accommodation can result in poor performance, high levels of sickness absence, or re-injury. High quality supervisor-subordinate relationships can encourage an employee to share information about his/her disability with a supervisor resulting in more appropriate job accommodation.

High level of leader empathy has the ability to mitigate the negative effect of perceived disability severity. Thus, for industries and types of jobs where injuries are common, companies might consider assessing potential supervisors on the empathy construct. In addition, subordinates with injuries might be assigned to supervisors who demonstrate a high level of empathy. There is no agreement whether empathy is a stable personality trait (Leiberg & Anders, 2006) or a situation-specific state (Duan & Hill, 1996). However, if we assume that empathy can be developed, it is advised to gain a direct experience of subordinates' lives and engage in listening to develop a higher level of empathy.

Potential Limitations and Opportunities for Future Research

Despite substantial practical and theoretical contributions, this research has some limitations. First, cross-sectional data do not allow conclusions regarding causality. Future research should consider employing experimental and longitudinal designs to support casual relationships. Second, although we assessed the proposed model from two different perspectives, Study 1 and Study 2 were independent. We utilized self-reported measures and collected predictor and criterion measures from the same source. We provided empirical evidence that CMV did not confound our results. However, we suggest that future studies collect data from matched pairs of leaders and their subordinates with disabilities. That would also allow an examination of the congruence/incongruence of perceptions on disability severity and LMX quality.

Our results partially supported the notion that empathy acted as a moderator. Future research might examine empathy that is directed toward a particular employee rather than general level of empathy as a moderator between perceived disability severity and LMX quality. For the supervisor perspective, although the interaction term was significant, depicted moderation interaction did not reveal significant visual interaction effect. One of the possible explanations is that we tested interaction effects utilizing only low and high levels of empathy. Future research might consider employing more levels of empathy (e.g., high, medium, low).

Finally, this research has examined the effects of musculoskeletal injuries. There are different types and categories of disability, for example, visible/invisible (Joachim & Acorn, 2000), mental/physical (Dewa, Chau, & Dermer, 2010), etc. Thus, future research could examine how different disability types affect LMX quality and work outcomes. The effect of disability on supervisor-subordinate relationships and

consequently on the outcomes might be different for mental (e.g. depression, anxiety disorders or schizophrenia) or visible (e.g. wheelchair) disabilities.

Conclusion

In conclusion, the current research extends existing LMX and disability research by demonstrating the relationships between perceived disability severity, supervisor-subordinate relationships, and work outcomes. Overall, our results partially supported the proposed theoretical model. The current research highlights the role of empathy and LMX quality in a disability context. Although previous meta-analyses suggest only moderate agreement on LMX between leaders and followers (Cogliser et al., 2009; Sin et al., 2009), our research has shown there are more similarities than differences in the findings of employee and supervisor perspectives.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage

Alexander, E. R., & Wilkins, R. D. (1982). Performance rating validity: The relationship of objective and subjective measures of performance. *Group and Organization Studies, 7,* 485-496. doi: 10.1177/105960118200700410

Anderson, J. C., & Gerbing, D. W. (1998). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological bulletin, 103,* 411-423. doi: 10.1037/0033-2909.103.3.411

Ansari, M. A., Kee Mui Hung, D., & Aafaqi, R. (2007). Leader-member exchange and attitudinal outcomes: role of procedural justice climate. *Leadership & Organization Development Journal, 28*(8), 690-709. doi: 10.1108/01437730710835443

Aronsson, G., Gustafsson, K., & Dallner, M. (2000). Sick but yet at work: An empirical study of sickness presenteeism. *Journal of Epidemiology and Community Health, 54*, 502–509. doi: 10.1136/jech.54.7.502

Baldner, C., & McGinley, J. J. (2014). Correlation and exploratory factor analyses (EFA) of commonly used empathy questionnaires: New insights. *Motivation and Emotion, 38,* 727-744. doi: 10.1007/s11031-014-9417-2

Baldridge, D. C., & Veiga, J. F. (2006). The impact of anticipated social consequences on recurring disability accommodation requests. *Journal of Management*, *32*, 158-179. doi: 10.1177/0149206305277800

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology, 51*(6), 1173-1182. doi: 10.1037/0022-3514.51.6.1173

Bauer, T. N., & Green, S. G. (1996). Development of leader-member exchange: A longitudinal test. *Academy of Management Journal, 39,* 1538-1567. doi: 10.2307/257068

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107,* 238-46. doi: 10.1037/0033-2909.107.2.238

Bhal, K. T., & Ansari, M. A. (1996). Measuring quality of interaction between leaders and members. *Journal of Applied Social Psychology, 26,* 945-972. doi: 10.1111/j.1559-1816.1996.tb01119.x

Bhal, K. T., & Ansari, M. A. (2000). *Managing dyadic interactions in organizational leadership*. Sage Publications Pvt. Ltd.

Bhal, K. T., & Ansari, M. A. (2007). Leader-member exchange-subordinate outcomes relationship: role of voice and justice. *Leadership & Organization Development Journal, 28*(1), 20-35. doi: 10.1108/01437730710718227

Bhal, K. T., Gulati, N., & Ansari, M. A. (2009). Leader-member exchange and subordinate outcomes: test of a mediation model. *Leadership & Organization Development Journal, 30*(2), 106-125. doi: 10.1108/01437730910935729

Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: John Wiley.

Block, J., & Kremen, A. M. (1996). IQ and ego resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology, 70,* 349–361. doi: 10.1037/0022-3514.70.2.349

Bongers, P. M., Winter, C. R., Kompier, M. A. J., & Hildebrandt, V. H. (1993). Psychological factors at work and musculoskeletal disease. *Scandinavian Journal of Work, Environment & Health, 19,* 297-312.

Bound, J., & Waidmann, T. (2002). Accounting for recent declines in employment rates among working-aged men and women with disabilities. *Journal of Human Resources, 37*(2), 231-250.

Braddock, D., & Bachelder, L. (1994). *The glass ceiling and persons with disabilities.* Washington, DC: Glass Ceiling Commission, U.S. Department of Labor.

Brower, H. H., Schoorman, F. D., & Tan, H. H. (2000). A model of relational leadership: The integration of trust and leader-member exchange. *Leadership Quarterly, 11,* 227-250. doi: 10.1016/S1048-9843(00)00040-0

Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds), *Testing structural equation models*. Beverly Hills, CA: Sage.

Byrne, D. (1971). *The attraction parading*. New York, NY: Academic Press.

Canadian Survey on Disability (2012). Retrieved from http://www.statcan.gc.ca/pub/89-654-x/89-654-x2013002-eng.htm.

Capella, M. E. (2003). Comparing employment outcomes of vocational rehabilitation consumers with hearing loss to other consumers and the general labor force. *Rehabilitation Counseling Bulletin, 47*, 24-33. doi: 10.1177/00343552030470010401

Cardy, R. L., & Dobbins, G. H. (1986). Affect and appraisal accuracy: Liking as an integral dimension in evaluating performance. *Journal of Applied Psychology, 71,* 672-678. doi: 10.1037/0021-9010.71.4.672

Caverley, N., Cunningham, J. B., & MacGregor, J. N. (2007). Sickness presenteeism, sickness absenteeism, and health following restructuring in a public service organization. *Journal of Management Studies, 44,* 304-319. doi: 10.1111/j.1467-6486.2007.00690.x

Cleveland, J. N., & Murphy, K. R. (1992). Analyzing performance appraisal as goal-directed behavior. In G. R. Ferris & K. R. Rowland (Eds*.), Research in Personnel and Human Resources Management* (pp. 121-185). Greenwich, CT: JAI Press.

Cogliser, C. C., Schriesheim, C. A., Scandura, T. A., & Gardner, W. L. (2009). Balancing leader and follower perceptions of leader–member exchange: Relationships with performance and work attitudes. *Leadership Quarterly, 20*, 452–465. doi: 10.1016/j.leaqua.2009.03.010

Colella, A., DeNisi, A. S., & Varma, A. (1998). The impact of ratee's disability on performance judgments and choice as partner: The role of disability-job fit stereotypes and interdependence of rewards. *Journal of Applied Psychology, 83*(1), 102-111. doi: 0021-9010/98/$3.00

Colella, A., & Stone, D. L. (2005). Workplace discrimination toward persons with disabilities: A call for some new research directions. *Discrimination at work: The psychological and organizational bases,* 227-253.

Colella, A., & Varma, A. (2001). The impact of subordinate disability on leader-member exchange relationships. *Academy of Management Journal, 44*, 304-315. doi: 10.2307/3069457

Connor, K. M., & Davidson, J. R. T. (2003) Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18,* 76-83. doi: 10.1002/da.10113

Costello, A. B. & Osborne, J. W. (2005). Best practices in Exploratory Factor Analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation, 10*(7), 1-9.

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*, 874-900. doi: 10.1177/0149206305279602

Crowne, D. P., & Marlowe, D. A. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24,* 349-354. doi: 10.1037/h0047358

Dansereau. F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role-making process. *Organizational Behavior and Human Performance, 13*, 46-78. doi: 10.1016/0030-5073(75)90005-7

Dewa, C. S., Chau, N., & Dermer, S. (2010). Examining the comparative incidence and costs of physical and mental health-related disabilities in an employed population. *Journal of Occupational and Environmental Medicine*, *52*(7), 758-762. doi: 10.1097/JOM.0b013e3181e8cfb5

Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review, 11*, 618-634. doi: 10.2307/258314

Duan, C. M., & Hill, C. E. (1996). The current state of empathy research. *Journal of Counselling Psychology, 43*(3), 261-274. doi: 10.1037/0022-0167.43.3.261

Duarte, N. T., Goodson, J. R., & Klich, N. R. (1994). Effects of dyadic quality and duration on performance appraisal. *Academy of Management Journal, 37,* 499-521. doi: 10.2307/256698

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris G. R. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management*, *38*, 1715-1759. doi: 10.1177/0149206311415280

Dunegan, K. J., Duchon, D., & Uhl-Bien, M. (1992). Examining the link between leader-member exchange and subordinate performance: The role of task analyzability and variety as moderators. *Journal of Management, 18,* 59-76. doi: 10.1177/014920639201800105

Dunham, R. B., & Smith, F. J. (1979). Organizational Surveys. Glenview, IL: Scott-Foresman.

Dwertmann, D. J. G., & Boehm, S. A. (2016). Status matters: The asymmetric effects of supervisor-subordinate disability incongruence and climate for inclusion. *Academy of Management Journal, 59*(1), 44-64. doi: org/10.5465/amj.2014.0093

Epitropaki, O., & Martin, R. (2005). From ideal to real: A longitudinal study of the role of implicit leadership theories on leader–member exchanges and employee outcomes. *Journal of Applied Psychology, 90,* 659–676. doi: 10.1037/0021-9010.90.4.659

Errico, A., Viotti, S., Baratti, A., Mottura, B., Barocelli, A. P., Tagna, M., et al. (2013). Low back pain and associated presenteeism among hospital nursing staff. *Journal of Occupational Health, 55,* 276-283. doi: 10.1539/joh.12-0261-OA

Fine, M., & Asch, A. (1988). Disability beyond stigma: Social interaction, discrimination, and activism. *Journal of Social Issues, 44*, 3-21. doi: 10.1111/j.1540-4560.1988.tb02045.x

Fulton, S. A., & Sabornie, E. J. (1994). Evidence of employment inequality among females with disabilities. *The Journal of Special Education, 28*, 149-165. doi: 10.1177/002246699402800203

Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology, 82*, 827-844. doi: 10.1037/0021-9010.82.6.827

Gewurtz, R., & Kirsh, B. (2009). Disruption, disbelief and resistance: A meta-synthesis of disability in the workplace. *Work, 34,* 33-44. doi: 10.3233/WOR-2009-0900

Goetzel, R. Z., Long, S. R., Ozminkowski, R. J., Hawkins, K., Wang, S., & Lynch, W. (2004). Health, absence, disability, and presenteeism cost estimates of certain physical and mental health conditions affecting US employers. *Journal of Occupational and Environmental Medicine, 46*(4), 398-412.

Golden, T. D., & Veiga, J. F. (2008). The impact of superior–subordinate relationships on the commitment, job satisfaction, and performance of virtual workers. *The Leadership Quarterly, 19*, 77–88. doi: 10.1016/j.leaqua.2007.12.009

Graen, G. B. (1976). Role-making processes within complex organizations, In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 1201-1245). Chicago, IL: Rand-McNally.

Graen, G. B., & Cashman, J. (1975). A role-making model of leadership in formal organizations: A development approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers* (pp. 32-58). Kent, OH: Kent State University Press.

Graen, G., Novak, M., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance, 30,* 109-131. doi: 10.1016/0030-5073(82)90236-7

Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Research in Organizational Behavior, 9*, 175–208. doi: 10.1016/0030-5073(82)90236-7

Graen, G. B., & Uhl-Bein, M. (1991). The transformation of professionals into self-managing and partially self-designing contributors: Toward a theory of leadership making. *Journal of Management Systems, 3*, 33-48.

Graen, G. B., & Uhl-Bein, M. (1995). Relationship-based approach to leadership – Development of leader-member exchange (LMX) theory of leadership over 25 years – Applying a multilevel multidomain perspective. *Leadership Quarterly, 6*(2), 219-247. doi: 10.1016/1048-9843(95)90036-5

Greenwood, N., & Johnson, V. A. (1987). Employer perspectives on workers with disabilities. *Journal of Rehabilitation, 53*, 37-45.

Greguras, G. J., & Ford, J. M. (2006). An examination of the multidimensionality of supervisor and subordinate perceptions of leader-member exchange. *Journal of Occupational and Organizational Psychology, 79,* 433-465. doi: 10.1348/096317905X53859

Grinyer, A., & Singleton, V. (2000). Sickness absence as risk-taking behavior: A study of organizational and cultural factors in the public sector. *Health, Risk & Society, 2*, 7–21. doi: 10.1080/136985700111413

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. (6thed.) Dorling Kindersley: India.

Harris, K. J., & Kacmar, K. M. (2006). Too much of a good thing: The curvilinear effect of leader-member exchange on stress. *The Journal of Social Psychology, 146,* 65-84. doi: 10.3200/SOCP.146.1.65-84

Hayes, A. F. (2013*). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

Hemp, P. (2004). Presenteeism: At work – But out of it. *Harvard Business Review, 82*, 49–58.

Hernandez, B., McDonald, K., Divilbiss, M., Horin, E., Velcoff, J., & Donoso, O. (2008). Reflections from employers on the disabled workforce: Focus groups with healthcare,

hospitality and retail administrators. *Employee Responsibilities and Rights Journal*, *20*, 157-164. doi: 10.1007/s10672-008-9063-5

Hogan, R. (1969). Development of an empathy scale. *Journal of Consulting and Clinical Psychology, 33,* 307–316. doi: 10.1037/h0027580

Hojat, M., Gonnella, J. S., Nasca, T. J., Mangione, S., Vergare, M., & Magee, M. (2002). Physician empathy: Definition, components, measurement, and relationship to gender and specialty. *The American Journal of Psychiatry, 159,* 1563-1569. doi: 10.1176/appi.ajp.159.9.1563

Hojat, M., Mangione, S., Gonnella, J. S., Nasca, T., Veloski, J. J., & Kane, G. (2001). Empathy in medical education and patient care. *Academic Medicine, 76,* 669.

Ii, A. Z., & Sipps, G. J. (1985). Cross-validation of a short form of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology, 41*(2), 236-238. doi: 10.1002/1097-4679(198503)41:2<236::AID-JCLP2270410217>3.0.CO;2-H

Jette, A. M., & Badley, E. (2000). Conceptual issues in the measurement of work disability. In N. Mathiowetz & G. S. Wunderlich (Eds.), *Survey measurement of work disability: Summary of a workshop* (pp. 4-27). Washington, DC: National Academy Press.

Joachim, G., & Acorn, S. (2000). Stigma of visible and invisible chronic conditions. *Journal of advanced nursing, 32*(1), 243-248. doi: 10.1046/j.1365-2648.2000.01466.x

Johns, G. (2011). Attendance dynamics at work: The antecedents and correlates of presenteeism, absenteeism, and productivity loss. *Journal of Occupational Health Psychology, 16*, 483-500. doi: 10.1037/a0025153

Jolliffe, D., & Farrongton, D. P. (2006). Development and validation of the Basic Empathy Scale. *Journal of Adolescence, 29,* 589-611. doi:10.1016/j.adolescence.2005.08.010

Koopman, C., Pelletier, K. R., Murray, J. F., Sharda, C. E., Berger, M. L., Turpin, R. S. et al. (2002). Stanford presenteeism scale: Health status and employee productivity. *Journal of Occupational and Environmental Medicine, 44,* 14-20. doi: 10.1097/00043764-200201000-00004

Koopmans, P. C., Roelen, C. A., & Groothoff, J. W. (2008). Frequent and long-term absence as a risk factor for work disability and job termination among employees in the private sector. *Occupational and environmental medicine, 65*(7), 494-499. doi: 10.1136/oem.2007.034322

Kulkarni, M., & Lengnick-Hall, M. L. (2014). Obstacles to success in the workplace for people with disabilities: A review and research agenda. *Human Resource Development Review, 13*, 158-180. doi: 10.1177/1534484313485229

Lazarus, R. S. (1993). From psychological stress to emotions: A history of changing outlooks. *Annual Review of Psychology, 44*, 1–21. doi: 10.1146/annurev.ps.44.020193.000245

Lee, J. H., Nam, S. K., Kim, A. R., Kim, B., Lee, M. Y., & Lee, S. M. (2013). Resilience: A meta-analytic approach. *Journal of Counseling & Development, 91*, 269-279. doi: 10.1002/j.1556-6676.2013.00095.x

Leech N. L., Barrett, K. C., & Morgan, G. A. (2005). *SPSS for intermediate statistics: Use and interpretation*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Leiberg, S., & Anders, S. (2006). The multiple facets of empathy: A survey of theory and evidence. *Understanding Emotions, 156*, 419-440. doi: 10.1016/S0079-6123(06)56023-6

Liden, R. C., & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management, 24*, 43-72. doi: 10.1016/S0149-2063(99)80053-1

Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader–member exchange theory: The past and potential for future. In G. R. Ferris (Ed.), *Research in Personnel and Human Resources Management* (Vol. 15, pp. 47–119). Greenwich, CT: JAI Press.

Liden, R. C., Wayne, S. J., & Stilwell, D. (1993). A longitudinal study on the early development of leader-member exchanges. *Journal of Applied Psychology, 78*, 662-674. doi: 10.1037/0021-9010.78.4.662

Locke, E. A. (1976). The cause and nature of job satisfaction. In M.D. Dunnette (Ed.), Handbook of industrial and organizational psychology (pp. 1297–1349). Chicago, IL: Rand McNally.

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development & Psychopathology, 12*, 857–885. doi: 10.1017/S0954579400004156

Lynch, J. E., & Finkelstein, L. M. (2015). An experimental investigation into judgment and behavioral implications of disability-based stereotypes in simulated work decisions: Evidence of shifting standards. *Journal of Applied Social Psychology, 45*(11), 613-628. doi: 10.1111/jasp.12324

MacEachen, E., Clarke, J., Franche, R. L, & Irvin, E. (2006). Systematic review of the qualitative literature on return to work after injury. *Scandinavian Journal of Work Environment & Health, 32*, 257-269. doi: 10.5271/sjweh.1009

MacGregor, J. N., Cunningham, J. B., & Caverley, N. (2008). Factors in absenteeism and presenteeism: Life events and health events. *Management Research News, 31*, 607–615. doi: 10.1108/01409170810892163

Mahsud, R., Yukl, G., & Prussia, G. (2010). Leader empathy, ethical leadership, and relations-oriented behaviors as antecedents of leader-member exchange quality. *Journal of Managerial Psychology, 25*, 561-577. doi: 10.1108/02683941011056932

Major, D. A., & Morganson, V. J. (2011). Coping with work-family conflict: A leader-member exchange perspective. *Journal of Occupational Health Psychology, 16*, 126-138. doi: 10.1037/a0021727

Martin, R., Epitropaki, O., Thomas, G., & Topaka, A. (2010). A critical review of leader-member relationship (LMX) research: Future prospects and directions. *International Review of Industrial and Organizational Psychology* (pp. 61-91). Chichester: Wiley.

Maslyn, J., & Uhl-Bein, M. (2001). Leader-member exchange and its dimensions: Effects of self-effort and other's effort on relationship quality. *Journal of Applied Psychology, 86*(4), 697-708. doi 10.1037/0021-9010.86.4.69

Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavioral Research, 44,* 1-23. doi: 10.3758/s13428-011-0124-6

McKevitt, C., Morgan, M., Dundas, D., & Holland, W. W. (1998). Sickness absence and working through illness: A comparison of two professional groups. *Journal of Public Health Medicine, 19*, 295–300.

Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality, 40,* 525–543. doi: 10.1111/j.1467-6494.1972.tb00078.x

Moss-Morris, R., Weinman, J., Petrie, K. J., Horne, R., Cameron, L. D., & Buick, D. (2002). The revised illness perception questionnaire (IPQ-R). *Psychology and Health, 17,* 1-16. doi: 10.1080/08870440290001494

Nederhof, A. J. (1985). Methods of coping with social desirability bias: A review. *European Journal of Social Psychology, 15,* 263-280. doi: 10.1002/ejsp.2420150303

Noonan, B. M., Gallor, S. M., Hensler-McGinnis, N. F., Fassinger, R. E., Wang, S., & Goodman, J. (2004). Challenge and success: A qualitative study of the career development of highly achieving women with physical and sensory disabilities. *Journal of Counseling Psychology*, *51*, 68-80. doi: 10.1037/0022-0167.51.1.68

O'Brein-Pallas, L., Shamian, J., Thomson, D., Alksnis, C., Koehoorn, M., Kerr, M., & Bruce, S. (2004). Work-related disability in Canadian nurses. *Journal of Nursing Scholarship, 36,* 352-357. doi: 10.1111/j.1547-5069.2004.04063.x

Ong, A. D., Zautra, A. J., & Reid, M. C. (2010). Psychological resilience predicts decreases in pain catastrophizing through positive emotions. *Psychology and Aging, 25,* 516-523. doi: 10.1037/a0019384

Paolacci, G., Chandler, J, & Ipeirotis, P. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making, 5*(5), 411-419.

Pledger, C. (2003). Discourse on disability and rehabilitation issues: Opportunities for psychology. *American Psychologist, 58*(4), 279. doi: 10.1037/0003-066X.58.4.279

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88,* 879-903. doi: 10.1037/0021-9101.88.5.879

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations how to control it. *Annual Review of Psychology, 63,* 539-569. doi: 10.1146/annurev-psych-120710-100452.

Pontin, J. (2007). *Artificial intelligence, with help from the humans*. New York Times. March.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40,* 879-891. doi: 10.3758/BRM.40.3.879

Ramırez-Maestre, C., Esteve, R., & Lopez-Martınez, A. E. (2012). The path to capacity: Resilience and spinal chronic pain. *Spine, 37*, 251-258. doi: 10.1097/BRS.0b013e31822e93ab

Ren, L. R., Paetzold, R. L., & Colella, A. (2008). A meta-analysis of experimental studies on the effects of disability on human resource judgments. Human Resource Management Review, 18(3), 191-203. doi: 10.1016/j.hrmr.2008.07.001

Roberts, J. M., & Masten, A. S. (2004). Resilience in context. In R. DeV. Peters, R. McMahon, & B. Leadbeater (Eds.), *Resilience in Children, Families, and Communities: Linking Context to Practice and Policy* (pp. 13–25). New York, NY: Kluwer Academic/Plenum.

Rockstuhl, T., Dulebohn, J. H., Ang, S., & Shore, L. M. (2012). Leader-member exchange (LMX) and culture: A meta-analysis of correlates of LMX across 23 countries. *Journal of Applied Psychology, 97*, 1097-1130. doi: 10.1037/a0029978

Ross, J., Irani, L., Silberman, M. S., Zaldivar, A., & Tomlinson, B. (2010). Who are the crowdworkers?: Shifting demographics in Mechanical Turk. In K. Edwards & T. Rodden (Eds.), *Proceedings of the ACM Conference on Human Factors in Computing Systems* (pp. 2863–2872). New York: ACM.

Roy, J. S., MacDermid, J. C., Amick III, B. C., Shannon, H. S., McMurtry, R., Roth,J. H., Grewal, R., Tang, K., & Beaton, D. (2011). Validity and responsiveness of presenteeism scales in chronic work-related upper-extremity disorders. *Physical Therapy, 91*, 254-266. doi: 10.2522/ptj.20090274

Sass, D. A., & Smith, P. L. (2006). The effects of parceling unidimensional scales on structural parameter estimates in structural equation modeling. *Structural Equation Modeling, 13,* 566–586.

Scherbaum, C. A., Scherbaum, K. L., & Popovich, P. M. (2005). Predicting job-related expectancies and affective reactions to employees with disabilities from previous work experience. *Journal of Applied and Social Psychology, 35,* 889-904. doi: 10.1111/j.1559-1816.2005.tb02151.x

Schriesheim, C.A., Neider, L.L., Scandura, T.A., & Tepper, B.J. (1992). Development and preliminary validation of a new scale (LMX-6) to measure leader–member exchange in organizations. *Educational and Psychological Measurement, 52,* 135– 147. doi: 10.1177/001316449205200119

Schriesheim, C. A., Neider, L. L., & Scandura, T. A. (1998). Delegation and leader-member exchange: Main effects, moderators, and measurement issues. *Academy of Management Journal, 41*, 298-318. doi: 10.2307/256909

Schultz, A. B., & Edington, D. W. (2007). Employee health and presenteeism: A systematic review. *Journal of Occupational Rehabilitation, 17,* 547-579. doi: 10.1007/s10926-007-9096-x

Shaw, W. S., Kristman, V. L., Williams-Whitt, K., Soklaridis, S., Huang, Y. H., Côté, P., & Loisel, P. (2014). The job accommodation scale (JAS): Psychometric evaluation of a new measure of employer support for temporary job modifications. *Journal of Occupational Rehabilitation, 24*, 755-765. doi: 10.1007/s10926-014-9508-7

Sin, H. P., Nahrgang, J. D., & Morgeson, F. P. (2009). Understanding why they don't see eye to eye: An examination of leader-member exchange (LMX) agreement. *Journal of Applied Psychology, 94,* 1048-1057. doi: 10.1037/a0014827

Spector, P. E., Chen, P. Y., & O'Connell, B. J. (2000). A longitudinal study of relations between job stressors and job strains while controlling for prior negative affectivity and strains. *Journal of Applied Psychology, 85,* 211–218. doi: 10.1037/0021-9010.85.2.211

Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. (2009). The Toronto empathy questionnaire: Scale development and initial validation of a factor-analytic solution to multiple empathy measures. *Journal of Personality Assessment, 91*, 62-71. doi: 10.1080/00223890802484381

Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the positive and negative affect schedule (PANAS). *Journal of Cross Cultural Psychology, 38*(2), 227-242. doi: 10.1177/0022022106297301

Uppal, S. (2005). Disability, workplace characteristics and job satisfaction. *International Journal of Manpower, 26*(4), 336-349. doi: 10.1108/01437720510609537

Vecchio, R. P., Griffeth, R. W., & Hom, P.W. (1986). The predictive utility of the vertical dyad linkage approach. *Journal of Social Psychology, 126,* 617–625. doi: 10.1080/00224545.1986.9713634

Volmer, J., Neissen, C., Spurk, D., Linz, A., & Abele, A. E. (2011). Reciprocal relationships between Leader-Member Exchange (LMX) and job satisfaction: A cross-lagged analysis. *Applied Psychology, 60*(4), 522-545. doi: 0.1111/j.1464-0597.2011.00446.x

Vornholt, K., Uitdewilligen, S., & Nijhuis, F. J. N. (2013). Factors affecting the acceptance of people with disabilities at work: A literature review. *Journal of Occupational Rehabilitation, 23,* 463-475. doi: 10.1007/s10926-013-9426-0

Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal, 40*, 82-111. doi: 10.2307/257021

World Health Organization (WHO) (2002). *International classification of functioning, disability & health*. Geneva, Switzerland: WHO. Retrieved from http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf

White, B., Driver, S., & Warren, A. M. (2010). Resilience and indicators of adjustment during rehabilitation from a spinal cord injury. *Rehabilitation Psychology, 55,* 23–32. doi: 10.1037/a0018451

Williams, C. (2006). Disability in the workplace. *Perspectives on the Labour and Income, 7*. Retrieved from http://www.statcan.gc.ca/pub/75-001-x/75-001-x2006102-eng.pdf.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617. doi: 10.1177/014920639101700305

Williams-Whitt, K., & Taras, D. (2010). Disability and the performance paradox: can social capital bridge the divide? *British Journal of Industrial Relations, 48*(3), 534-559. doi: 10.1111/j.1467-8543.2009.00738.x

Wilson, K. S., Sin, H. P., & Colon, D. E. (2010). What about the leader in leader-member exchange? The impact of resource exchanges and substitutability on the leader. *Academy of Management Review, 35*, 358-372.

Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly, 13,* 243-274. doi: 10.1016/S1048-9843(02)00099-1

Zautra, A. J., Fasman, R., Parrish, B. P., & Davis, M. C. (2007) Daily fatigue in women with osteoarthritis, rheumatoid arthritis and fibromyalgia. *Pain, 128*, 128-135. doi: 10.1016/j.pain.2006.09.004

Appendix A1

Scales and Subscales	*Items Included*	*Items Deleted*
Revised Illness Perception Questionnaire		
Timeline acute / chronic	My injury will last a short time (R) My injury is likely to be permanent rather than temporary My injury will last for a long time My injury will pass quickly (R) I expect to have this injury for the rest of my life	My injury will improve in time (R)
Timeline cyclical	The symptoms of my injury change a great deal from day to day The symptoms of my injury come and go in cycles My injury is very unpredictable I go through cycles in which my injury gets better and worse	
Consequences	My injury has major consequences for my job My injury strongly affects how the others see me My injury has serious financial consequences	My injury causes difficulties for those who are close to me My injury does not have much effect on my job (R) My injury is a serious condition
Personal Control	What I do can determine whether my injury gets better or worse The course of my injury depends on me I have the power to influence my injury	There is a lot that I can do to control my symptoms Nothing I do will affect my injury (R) My actions will have no effect on the outcome of my injury (R)
Treatment control	The negative effects of my injury can be prevented or avoided by my treatment My treatment can control my injury	There is very little that can be done to improve my injury (R) My treatment will be effective in curing my injury There is nothing that can help my injury (R)

Scales and Subscales	*Items Included*	*Items Deleted*
Job Accommodation		
Modified physical workload	To help me avoid prolonged periods of standing To help me avoid twisting or bending To help me avoid working with objects at floor level	To help me avoid lifting heavy objects To help me avoid awkward postures. To limit pushing or pulling heavy objects
Modified work environment	By rearranging my work space to be more comfortable By altering the height of my work surface By providing special equipment or tools to make work less painful	By providing a more comfortable place to sit By rotating my job tasks To help me avoid long periods of sitting
Modified work schedule	So I work at different times So I work shorter days	So I can take more breaks and rest periods
Alternate duties	By having me work at another job temporarily By replacing my normal job tasks with easier things By moving me to a different site or location	
Arranged work assistance	By asking coworkers to assist me as needed By arranging for others to help By finding someone else to do the heavy work	
Resilience		
Personal competence		I give my best effort no matter what I can achieve my goals When things look hopeless, I don't give up I am not easily discouraged by failure I think of myself as a strong person I like challenges I work to attain my goals I should take pride in my achievements

Scales and Subscales	*Items Included*	*Items Deleted*
Resilience		
Trust in one's instinct	I prefer to take the lead in problem solving I can handle unpleasant feelings	I see the humorous side of things Coping with stress strengthens Under pressure, I focus and think clearly I make unpopular or difficult decisions I have to act on a hunch
Positive acceptance to change	I am able to adapt to change I can deal with whatever comes Past success gives me confidence for new challenges	I have close and secure relationships I tend to bounce back after illness or hardship
Control	I have a strong sense of purpose I am in control of my life	I know where to turn for help
Spiritual influences	Sometimes fate or God can help Things happen for a reason	
Job satisfaction	All in all, I am satisfied with my job Compared to most jobs, mine is a pretty good one	

Note. R = Revised item

Appendix A2

Scales and Subscales	*Items Included*	*Items Deleted*
Revised Illness Perception Questionnaire		
Timeline acute / chronic	My subordinate's injury will last a short time (R) My subordinate's injury is likely to be permanent rather than temporary My subordinate's injury will last for a long time My subordinate's injury will pass quickly (R) I expect my subordinate will have this injury for the rest of my life My subordinate's injury will improve in time (R)	
Timeline cyclical	The symptoms of my subordinate's injury change a great deal from day to day The symptoms of my subordinate's injury come and go in cycles My subordinate's injury is very unpredictable My subordinate goes through cycles in which his/her injury gets better and worse	
Consequences	My subordinate's injury has major consequences for his/her job My subordinate's injury strongly affects the others see him/her My subordinate's injury has serious financial consequences for him/her My subordinate's injury causes difficulties for people he/she works with	My subordinate's injury is a serious condition My subordinate's injury does not have much effect on his/her job (R)
Personal Control	What my subordinate does can determine whether his/her injury gets better or worse The course of my subordinate's injury depends on him/her My subordinate has the power to influence his/her injury	There is a lot that my subordinate can do to control his/her symptoms Nothing my subordinate does will affect his/her injury (R) My subordinate's actions will have no effect on the outcome of his/her injury (R)

Scales and Subscales	*Items Included*	*Items Deleted*
Revised Illness Perception Questionnaire		
Treatment control	The negative effects of my subordinate's injury can be prevented or avoided by his/her treatment My subordinate's treatment can control his/her injury	There is very little that can be done to improve my subordinate's injury (R) My subordinate's treatment will be effective in curing his/her injury There is nothing that can help my subordinate's injury (R)
Empathy		
Affective	My friends' emotions don't affect me much (R) Other people's feeling don't bother me at all (R) My friend's unhappiness doesn't make me feel anything (R)	After being with a friend who is sad about something, I usually feel sad I get caught up in other people's feelings easily
Cognitive	I can understand my friend's happiness when she/he does well at something When someone is feeling 'down' I can usually understand how they feel I can usually realize quickly when a friend is angry	I am not usually aware of my friends' feelings (R) I have trouble figuring out when my friends are happy (R)
Job Accommodation		
Modified physical workload	Avoid prolonged periods of standing Avoid twisting or bending Avoid working with objects at floor level	Avoid lifting heavy objects Avoid awkward postures Limit pushing or pulling heavy objects
Modified work environment	Rearrange my workplace to be more comfortable Alter height of work surface Use special equipment or tools to make work less painful	Find a more comfortable place to sit Rotate between job tasks Reduce long periods of prolonged sitting

Scales and Subscales	*Items Included*	*Items Deleted*
Job Accommodation		
Modified work schedule	Change work time Shorten work days	Arrange more breaks and rest periods
Alternate duties	Assign to another job temporarily Replace normal job tasks with easier things Move to a different site or location	
Arranged work assistance	Ask coworkers to assist as needed Arrange for others to help Find someone else to do the heavy work	
Performance	Adequately completes assigned duties Fulfills responsibilities specified in job description Performs tasks that are expected of him/her Meets formal performance requirements of the job Fails to perform essential duties (R)	Engages in activities that will directly affect his/her performance evaluation Neglects aspects of the job he/she is obligated to perform (R)

Note. R = Revised item

Appendix A3

Scale	*Original Items*	*Modified Items*
Job Accommodation Scale		
Modified physical workload	Avoid lifting heavy objects	To help me avoid lifting heavy objects
	Avoid awkward postures	To help me avoid awkward postures
	Limit pushing or pulling heavy objects	To limit pushing or pulling heavy objects
	Avoid prolonged periods of standing	To help me avoid prolonged periods of standing
	Avoid twisting or bending	To help me avoid twisting or bending
	Avoid working with objects at floor level	To help me avoid working with objects at floor level
Modified work environment	Rearrange my work space to be more comfortable	By rearranging my work space to be more comfortable
	Alter the height of my work surface	By altering the height of my work surface
	Use special equipment or tools to make work less painful	By providing special equipment or tools to make work less painful
	Find a more comfortable place to sit	By providing a more comfortable place to sit
	Rotate my job tasks	By rotating my job tasks
	Reduce long periods of sitting	To help me avoid long periods of sitting
Modified work schedule	Change work time	So I work at different times
	Shorten work days	So I work shorter days
	Arrange more breaks and rest periods	So I can take more breaks and rest periods
Find alternate duties	Assign to another job temporarily	By having me work at another job temporarily
	Replace normal job tasks with easier things	By replacing my normal job tasks with easier things
	Move to a different site or location	By moving me to a different site or location
Arranged work assistance	Ask coworkers to assist as needed	By asking coworkers to assist me as needed
	Arrange for others to help	By arranging for others to help
	Find someone else to do the heavy work	By finding someone else to do the heavy work

Scale	*Original Items*	*Modified Items*
Illness Perception Questionnaire		
Timeline acute/chronic	My illness will last a short time	My injury will last a short time
	My illness is likely to be permanent rather than temporary	My injury is likely to be permanent rather than temporary
	My illness will last for a long time	My injury will last for a long time
	My illness will pass quickly	My injury will pass quickly
	I expect to have this illness for the rest of my life	I expect to have this injury for the rest of my life
	My illness will improve in time	My injury will improve in time
Timeline cyclical	The symptoms of my illness change a great deal from day to day	The symptoms of my injury change a great deal from day to day
	The symptoms of my illness come and go in cycles	The symptoms of my injury come and go in cycles
	My illness is very unpredictable	My injury is very unpredictable
	I go through cycles in which my illness gets better and worse	I go through cycles in which my injury gets better and worse
Consequences	My illness is a serious condition	My injury is a serious condition
	My illness has major consequences for my job	My injury has major consequences for my job
	My illness does not have much effect on my job	My injury does not have much effect on my job
	My illness strongly affects how the others see me	My injury strongly affects how the others see me
	My illness has serious financial consequences	My injury has serious financial consequences
	My illness causes difficulties for those who are close to me	My injury causes difficulties for those who are close to me

Scale	*Original Items*	*Modified Items*
Illness Perception Questionnaire		
Personal control		
	What I do can determine whether my illness gets better or worse	What I do can determine whether my injury gets better or worse
	The course of my illness depends on me	The course of my injury depends on me
	Nothing I do will affect my illness	Nothing I do will affect my injury
	I have the power to influence my illness	I have the power to influence my injury
	My actions will have no effect on the outcome of my illness	My actions will have no effect on the outcome of my injury
Treatment control	There is very little that can be done to improve my illness	There is very little that can be done to improve my injury
	My treatment will be effective in curing my illness	My treatment will be effective in curing my injury
	The negative effects of my illness can be prevented or avoided by my treatment	The negative effects of my injury can be prevented or avoided by my treatment
	My treatment can control my illness	My treatment can control my injury
	There is nothing that can help my illness	There is nothing that can help my injury
Perception of Leader Empathy	I am a good observer of others' emotions	My supervisor is a good observer of others' emotions
	I am sensitive to the feelings and emotions of others	My supervisor is sensitive to the feelings and emotions of others
	I have a good understanding of the emotions of people around me	My supervisor has a good understanding of the emotions of people around him/her
	I always know my friends' emotions from their behavior	My supervisor always knows his/her subordinates' emotions from their behavior

Appendix A4

Scale	*Original Item*	*Modified Item*
Illness Perception Questionnaire		
Timeline acute/chronic	My illness will last a short time	My subordinate's injury will last a short time
	My illness is likely to be permanent rather than temporary	My subordinate's injury is likely to be permanent rather than temporary
	My illness will last for a long time	My subordinate's injury will last for a long time
	My illness will pass quickly	My subordinate's injury will pass quickly
	I expect to have this illness for the rest of my life	I expect my subordinate will have this injury for the rest of my life
	My illness will improve in time	My subordinate's injury will improve in time
Timeline cyclical	The symptoms of my illness change a great deal from day to day	The symptoms of my subordinate's injury change a great deal from day to day
	The symptoms of my illness come and go in cycles	The symptoms of my subordinate's injury come and go in cycles
	My illness is very unpredictable	My subordinate's injury is very unpredictable
	I go through cycles in which my illness gets better and worse	My subordinate goes through cycles in which his/her injury gets better and worse
Consequences	My illness is a serious condition	My subordinate's injury is a serious condition
	My illness has major consequences for my job	My subordinate's injury has major consequences for his/her job
	My illness does not have much effect on my job	My subordinate's injury does not have much effect on his/her job
	My illness strongly affects how the others see me	My subordinate's injury strongly affects the others see him/her
	My illness has serious financial consequences	My subordinate's injury has serious financial consequences for him/her
	My illness causes difficulties for those who are close to me	My subordinate's injury causes difficulties for people he/she works with

Scale	*Original Item*	*Modified Item*
Personal control	There is a lot that I can do to control my symptoms	There is a lot that my subordinate can do to control his/her symptoms
	What I do can determine whether my illness gets better or worse	What my subordinate does can determine whether his/her injury gets better or worse
	The course of my illness depends on me	The course of my subordinate's injury depends on him/her
	Nothing I do will affect my illness	Nothing my subordinate does will affect his/her injury
	I have the power to influence my illness	My subordinate has the power to influence his/her injury
	My actions will have no effect on the outcome of my illness	My subordinate's actions will have no effect on the outcome of his/her injury
Treatment control	There is very little that can be done to improve my illness	There is very little that can be done to improve my subordinate's injury
	My treatment will be effective in curing my illness	My subordinate's treatment will be effective in curing his/her injury
	The negative effects of my illness can be prevented or avoided by my treatment	The negative effects of my subordinate's injury can be prevented or avoided by his/her treatment
	My treatment can control my illness	My subordinate's treatment can control his/her injury
	There is nothing that can help my illness	There is nothing that can help my subordinate's injury

Scale	*Original Item*	*Modified Item*
Leader-Member Exchange		
Affect	I like my supervisor very much as a person	I like this employee very much as a person
	My supervisor is the kind of person that one would like to have as a friend	This employee is the kind of person that one would like to have as a friend
	My supervisor is a lot of fun to work with	This employee is a lot of fun to work with
Loyalty	My supervisor defends my work, actions to his/her superior even without complete knowledge of the issue	This employee defends my work, actions to the superior even without complete knowledge of the issue
	My supervisor would come to my defense if I were "attacked" by others	This employee would come to my defense if I were "attacked" by others
	My supervisor would defend me to others in the organization if I make an honest mistake	This employee would defend me to others in the organization if I make an honest mistake
Contribution	I am willing to apply extra efforts beyond those normally required, to meet my supervisor's work goals	This employee is willing to apply extra efforts beyond those normally required, to meet my work goals
	I do not mind working my hardest for my supervisor	This employee does not mind working his/her hardest for me
	I do work for my supervisor that goes beyond what is specified in my job description	This employee does work for me that go beyond what is specified in his/her job description
Professional respect	I am impressed with my supervisor's knowledge of his job	I am impressed with this employee's knowledge of his/her job
	I respect my supervisor's knowledge of and competence on the job	I respect this employee's knowledge of and competence on the job
	I admire my supervisor's professional skills	I admire this employee's professional skills

Appendix B1

Zero-Order Correlations between Predictors and Criterion Variables: Employee Perspective (Study 1)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	00	-05	04	-06	14*	35**	32**	34**	22**	29**
JAS_F2	07	04	06	-07	11	44**	38**	39**	23**	35**
JAS_F3	08	14*	23**	-08	18**	28**	25**	20**	01	18**
JAS_F4	-02	10	24**	-08	24**	27**	18**	15*	01	18**
JAS_F5	-00	-06	12	-17**	02	42**	37**	40**	26**	34**
RES_F2	-05	-16*	-01	-11	-18**	25**	28**	30**	44**	33**
RES_F3	-10	-08	-24**	-24**	-29**	23**	35**	34**	47**	36**
RES_F4	-10	-10	-09	-21**	-21**	25**	24**	23**	34**	28**
RES_F5	06	14*	03	-15*	-04	17**	15*	01	24**	17*
PRE_F1	05	02	37**	19**	12*	-13*	-17**	-18**	-16*	-19**
PRE_F2	28**	26**	71**	24**	28**	-13*	-14*	-01	-00	-19**
Job Satisfaction	-20**	-19**	-19**	-25**	-19**	53**	56**	53**	41**	54**

Note. $N = 264$. Decimals points are omitted from correlation coefficients.
EM = Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical;IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; PRE_1 = Presenteeism: Completing work; PRE_2 = Presenteeism: Avoiding distractions; RES_1 = Resilience: Trust in one's instincts; RES_2 = Resilience: Positive acceptance to change; RES_3 = Resilience: Control; RES_4 = Resilience: Spiritual influences.
* $p < .05$; ** $p < .01$

Appendix B2

Zero-Order Correlations between Predictors and Criterion Variables Controlling for Social Desirability: Employee Perspective (Study 1)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	-01	-06	02	-05	14*	33**	30**	33**	18**	26**
JAS_F2	05	04	04	-06	11	41**	35**	36**	19**	31**
JAS_F3	06	14*	22**	-08	17**	25**	22**	17**	04	14*
JAS_F4	-04	11	23**	-08	23**	24**	15*	12*	00	14*
JAS_F5	-01	-06	11	-17**	01	41**	36**	40**	25**	33**
RES_F2	-09	-18**	-04	-11	-20**	19**	23**	25**	37**	27**
RES_F3	-14*	-10	-29**	-24**	-32**	16**	31**	30**	41**	31**
RES_F4	-15*	-12	-13*	-21**	-23**	18**	18**	17**	26**	21**
RES_F5	04	14*	01	-14*	-05	13*	12	07	20**	12
PRE_F1	07	01	39**	19**	13*	-09	-14*	-15*	-12	-15*
PRE_F2	28**	26**	71**	24**	28**	-13*	-15*	-12	-04	-20**
Job Satisfaction	-27**	-20**	-24**	-26**	-22**	48**	53**	49**	34**	49**

Note. $N = 264$. Decimals points are omitted from correlation coefficients.
EM = Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical;IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; PRE_1 = Presenteeism: Completing work; PRE_2 = Presenteeism: Avoiding distractions; RES_1 = Resilience: Trust in one's instincts; RES_2 = Resilience: Positive acceptance to change; RES_3 = Resilience: Control; RES_4 = Resilience: Spiritual influences.
* $p < .05$; ** $p < .01$

Appendix B3

Z Test of Difference between Zero-Order and Partial Correlations Controlling for Social Desirability: Employee Perspective (Study 1)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	.15	.11	.21	-.07	-.03	.22	.18	.12	.46	.25
JAS_F2	.25	-.03	.17	-.06	.06	.31	.33	.31	.48	.38
JAS_F3	.22	-.04	.11	-.06	.04	.35	.35	.36	.52	.43
JAS_F4	.25	-.03	.12	-.06	.03	.37	.40	.40	.57	.45
JAS_F5	.13	.01	.09	-.03	.03	.09	.09	.07	.17	.12
RES_F2	.46	.25	.44	-.08	.21	.74	.58	.48	.76	.66
RES_F3	.46	.18	.59	.01	.27	.71	.45	.38	.66	.56
RES_F4	.55	.15	.49	.00	.27	.80	.71	.66	.92	.80
RES_F5	.20	.02	.21	-.05	.05	.44	.38	.38	.50	.46
PRE_F1	-.23	.00	-.24	.04	-.07	-.41	-.36	-.34	-.45	-.40
PRE_F2	-.04	.03	-.01	-.02	-.03	.10	.08	.04	.13	.13
Job Satisfaction	.73	.18	.60	.04	.30	.52	.41	.40	.85	.55

Note. $N = 264$.

EM = Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical;IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; PRE_1 = Presenteeism: Completing work; PRE_2 = Presenteeism: Avoiding distractions; RES_1 = Resilience: Trust in one's instincts; RES_2 = Resilience: Positive acceptance to change; RES_3 = Resilience: Control; RES_4 = Resilience: Spiritual influences.

All values are insignificant at the .05 level.

Appendix B4

Zero-Order Correlations between Predictors and Criterion Variables Controlling for Negative Affect: Employee Perspective (Study 1)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	03	-02	07	-03	16*	34**	31**	33**	23**	29**
JAS_F2	09	09	07	-06	13*	43**	38**	38**	23**	35**
JAS_F3	11	15*	25**	-07	17*	30**	28**	22**	11	21**
JAS_F4	-01	11	25**	-08	23**	29**	19**	16*	07	20**
JAS_F5	01	-03	13*	-16*	02	43**	37**	41**	27**	34**
RES_F2	-02	-08	07	-09	-10	18**	20**	24**	37**	26**
RES_F3	-07	01	-18**	-23**	-23**	15*	27**	29**	41**	29**
RES_F4	-06	-01	-01	-18**	-12	18**	16*	16*	26**	21**
RES_F5	08	17*	05	-15*	-03	17*	15*	11	23**	15*
PRE_F1	03	-02	36**	17*	10	-09	-13*	-13*	-15*	-15*
PRE_F2	25**	24**	70**	21**	26**	-06	-08	-06	01	-14*
Job Satisfaction	-19**	-09	-12	-22**	-09	46**	49**	46**	35**	47**

Note. $N = 264$. Decimals points are omitted from correlation coefficients.

EM = Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical;IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; PRE_1 = Presenteeism: Completing work; PRE_2 = Presenteeism: Avoiding distractions; RES_1 = Resilience: Trust in one's instincts; RES_2 = Resilience: Positive acceptance to change; RES_3 = Resilience: Control; RES_4 = Resilience: Spiritual influences.

* $p < .05$; ** $p < .01$

Appendix B5

Z Test of Difference between Zero-Order and Partial Correlations Controlling for Negative Affect: Employee Perspective (Study 1)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	-.26	-.31	-.28	-.35	-.30	.12	.06	.11	-.04	-.04
JAS_F2	-.21	-.59	-.17	-.07	-.22	.08	-.03	.10	-.02	-08
JAS_F3	-.27	-.20	-.27	-.20	.05	-.32	-.37	-.19	-.30	-.30
JAS_F4	-.11	-.10	-.12	-.04	.04	-.21	-.14	-.10	-.13	-.21
JAS_F5	-.17	-.28	-.20	-.06	-.07	-.10	.01	-.01	-.05	-.04
RES_F2	-.31	-.89	-.82	-.24	-.89	.84	.96	.65	.93	.83
RES_F3	-.32	-1.06	-.62	-.10	-.75	.91	.90	.62	.91	.89
RES_F4	-.44	-1.03	-.90	-.40	-1.00	.80	1.00	.72	.96	.84
RES_F5	-.28	-.35	-.23	.04	-.11	-.02	-.01	-.07	.16	.09
PRE_F1	.23	.44	.17	.23	.20	-.42	-.49	-.49	-.12	-.43
PRE_F2	.27	.30	.21	.38	.30	-.70	-.67	-.66	-.47	-.62
Job Satisfaction	-.20	-1.15	-.81	-.36	-1.12	1.02	1.21	.99	.84	1.00

Note. $N = 264$.

EM = Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical;IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect; PRE_1 = Presenteeism: Completing work; PRE_2 = Presenteeism: Avoiding distractions; RES_1 = Resilience: Trust in one's instincts; RES_2 = Resilience: Positive acceptance to change; RES_3 = Resilience: Control; RES_4 = Resilience: Spiritual influences.

All values are insignificant at the .05 level.

Appendix B6

Zero-Order Correlations between Predictors and Criterion Variables: Supervisor Perspective (Study 2)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM_A*	*EM_C*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	08	08	12	-01	-06	04	12	23**	17*	16*	22**
JAS_F2	10	18**	16*	,08	-05	01	11	13	16*	26**	22**
JAS_F3	-05	13	23**	10	-07	-06	-01	21**	20**	16*	19**
JAS_F4	-06	11	20**	04	-10	-06	02	13	15*	10	15*
JAS_F5	-08	07	14*	-05	-19**	07	35**	31**	27**	25**	33**
Performance	16*	05	-22**	04	03	27**	38**	59**	56**	66**	68**

Note. $N = 224$. Decimals points are omitted from correlation coefficients.
EM_A = Affective Empathy; EM_C = Cognitive Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical; IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect.
* $p < .05$; ** $p < .01$

Appendix B7

Zero-Order Correlations between Predictors and Criterion Variables Controlling for Social Desirability: Supervisor Perspective (Study 2)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM_A*	*EM_C*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	07	06	08	00	-04	02	07	20**	13	12	18*
JAS_F2	09	16*	13	09	-04	00	07	10	13	23**	19**
JAS_F3	-07	10	18*	12	-05	-09	-10	14*	14*	09	13
JAS_F4	-08	08	14*	06	-08	-09	-07	05	08	02	07
JAS_F5	-11	04	07	-03	-17*	05	29**	25**	21**	18*	27**
Performance	15*	02	-29**	06	05	25**	34**	56**	54**	64**	66**

Note. $N = 224$. Decimals points are omitted from correlation coefficients.
EM_A = Affective Empathy; EM_C = Cognitive Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical; IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect.
* $p < .05$; ** $p < .01$

Appendix B8

Z Test of Difference between Zero-Order and Partial Correlations Controlling for Social Desirability: Supervisor Perspective (Study 2)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM_A*	*EM_C*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	.11	.18	.36	-.12	-.13	.15	.43	.36	.36	.40	.36
JAS_F2	.10	.15	.31	-.12	-.12	.14	.40	.38	.33	.31	.32
JAS_F3	.24	.29	.60	-.26	-.23	.30	.95	.74	.67	.78	.73
JAS_F4	.26	.31	.65	-.25	-.23	.32	.96	.84	.73	.87	.80
JAS_F5	.29	.34	.72	-.22	-.20	.27	.73	.74	.69	.79	.72
Performance	.14	.25	.76	-.18	-.20	.16	.46	.35	.35	.30	.28

Note. $N = 224$.
EM_A = Affective Empathy; EM_C = Cognitive Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical; IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect.
All values are insignificant at the .05 level.

Appendix B9

Zero-Order Correlations between Predictors and Criterion Variables Controlling for Negative Affect: Supervisor Perspective (Study 2)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM_A*	*EM_C*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	08	08	12	-02	-07	02	10	22**	15*	14*	20**
JAS_F2	10	18*	16*	07	-06	00	09	12	15*	25**	21**
JAS_F3	-05	13	23**	11	-06	-04	01	24**	23**	19**	24**
JAS_F4	-06	11	20**	04	-10	-05	03	15*	17*	12	17*
JAS_F5	-08	07	14*	-07	-21**	05	33**	29**	25**	23**	30**
Performance	16*	06	-22**	00	-01	21**	33**	55**	53**	63**	64**

Note. $N = 224$. Decimals points are omitted from correlation coefficients.
EM_A = Affective Empathy; EM_C = Cognitive Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical; IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect.
* $p < .05$; ** $p < .01$

Appendix B10

Z Test of Difference between Zero-Order and Partial Correlations Controlling for Negative Affect: Supervisor Perspective (Study 2)

Variables	*IPQ_F1*	*IPQ_F2*	*IPQ_F3*	*IPQ_F4*	*IPQ_F5*	*EM_A*	*EM_C*	*LMX_A*	*LMX_L*	*LMX_C*	*LMX_P*
JAS_F1	.00	-.01	-.01	.02	.01	.06	.05	.00	.02	.03	-.01
JAS_F2	-.01	.00	.00	-.01	-.02	-.05	-.05	-.08	-.10	-.11	-.17
JAS_F3	-.01	.00	.00	-.03	-.03	-.08	-.12	-.08	-.08	-.08	-.10
JAS_F4	.02	-.01	-.03	.00	.11	.27	.36	.32	.28	.28	.36
JAS_F5	.01	-.02	-.03	.11	.00	.24	.37	.30	.28	.28	.36
PERFORM	.06	-.05	-.08	.27	.24	.00	.40	.50	.48	.47	.59

Note. $N = 224$.
EM_A = Affective Empathy; EM_C = Cognitive Empathy; IPQ_1 = Illness perception: Timeline acute / chronic; IPQ_2 = Illness perception: Timeline cyclical; IPQ_3 = Illness perception: Consequences; IPQ_4 = Illness perception: Personal control; IPQ_5 = Illness perception: Treatment control; JAS_1 = Job accommodation: Modified physical workload; JAS_2 = Job accommodation: Modified work environment; JAS_3 = Job accommodation: Modified work schedule; JAS_4 = Job accommodation: Alternate duties; JAS_5 = Job accommodation: Arranged work assistance; LMX_A = Leader-member exchange: Affect; LMX_C = Leader-member exchange: Contribution; LMX_L = Leader-member exchange: Loyalty; LMX_P = Leader-member exchange: Professional respect.
All values are insignificant at the .05 level.

Appendix C1

Testing Mediation Hypothesis: Perceived Disability -- > LMX -- > Job Accommodation: Employee Perspective (Study1)

	Mediator				*Dependent Variable*			
Factor and Statistics	*LMX Affect*	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*	*JAS: Modified Physical Workload*		*JAS: Modified Work Environment*	
					Step 1	Step 2	Step 1	Step 2
Control variables:								
Age	.09	.10	.18**	.13*	.19**	.19**	.02	.07
Frequency of interaction with supervisor	.45**	.36**	.43**	.39**	.07	.07	.15*	.04
	R^2 = .20**	R^2 = .15**	R^2 = .25**	R^2 = .18**	R^2 = .04**		R^2 = .03*	
Independent Variables								
IPQ: Timeline acute/chronic	-.06	-.04	.03	-.02	.00	.02	.05	.07
IPQ: Timeline cyclical	.01	-.05	-.01	-.05	-.11	-.10	-.02	.02
IPQ: Consequences	-.12	-.14*	-.05	-.10	.02	.06	.02	.08
IPQ: Personal control	-.21**	-.17*	-.14*	-.20**	-.18*	**-.12**	-.17*	**-.10**
IPQ: Treatment control	.17*	.16*	.05	.10	.29**	**.23****	.22**	**.15***
	R^2 = .26**	R^2 = .20**	R^2 = .27**	R^2 = .24**	R^2 = .11**		R^2 = .08	
Mediator								
LMX Affect	--	--	--	--	.09	.07	.15	.12
LMX Loyalty	--	--	--	--	.28*	.28*	.27*	.29*
LMX Contribution	--	--	--	--	-.05	-.05	-.14	-.15
LMX Professional Respect	--	--	--	--	.00	.02	.08	.10
					R^2 = .14**	R^2 = .19**	R^2 = .17**	R^2 = .21**

Factor and Statistics	*Dependent Variable*					
	JAS: Modified Work Schedule		*JAS: Alternate Duties*		*JAS: Arranged Work Assistance*	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Control variables:						
Age	-.03	-.03	-.04	-.03	.12	.11
Frequency of interaction	.11	.06	.06	.06	.21**	.10
	R^2 = .01		R^2 = .00		R^2 = .06**	
Independent Variables						
IPQ: Timeline acute/chronic	-.01	.01	-.17*	-.15*	-.00	.02
IPQ: Timeline cyclical	.08	.09	.06	.08	-.10	-.08
IPQ: Consequences	.22**	.25**	.25**	.28**	.16*	.21**
IPQ: Personal control	-.24**	-.19**	-.24**	-.20**	-.24**	**-.19****
IPQ: Treatment control	.23**	.18*	.33**	.30**	.17*	.10
	R^2 = .14**		R^2 = .18**		R^2 = .14**	
Mediator						
LMX Affect	.30*	.25	.15	.06	.03	.01
LMX Loyalty	.04	.09	.01	.05	.39**	.43**
LMX Contribution	-.15	-.18*	-.16	-.17*	-.10	-.11
LMX Professional Respect	-.02	.02	.16	.20	.02	-.01
	R^2 = .07**	R^2 = .20**	R^2 = .05	R^2 = .22**	R^2 = .18**	R^2 = .25**

Note. N = 264. IPQ = Illness perception questionnaire; JAS = Job accommodation scale; LMX = Leader-member exchange.
* $p < .05$; ** $p < .01$

Appendix C2

Testing Mediation Hypothesis: Perceived Disability -- > LMX -- > Resilience: Employee Perspective (Study1)

Factor and Statistics	*Mediator*				*Dependent variable*			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*	*Resilience: Trust in Instincts*		*Resilience: Positive Acceptance to Change*	
					Step 1	Step 2	Step 1	Step 2
Control variables:								
Age	.09	.09	.19**	.13*	.12	.05	.13*	.05
Employee gender	.05	-.01	.02	.06	.09	.06	.01	.00
Frequency of interaction	.43**	.36**	.44**	.40**	.25*	.05	.24**	.03
	R^2 = .20**	R^2 = .14**	R^2 = .25**	R^2 = .19**	R^2 = .09**		R^2 = .08**	
Independent Variables								
IPQ: Timeline acute / chronic	-.06	-.04	.03	-.02	.02	.00	.03	.02
IPQ: Timeline cyclical	.01	-.05	-.01	-.05	-.13*	-.13*	.02	.02
IPQ: Consequences	-.12	-.14*	-.05	-.10	.08	.10	-.17*	-.14*
IPQ: Personal control	-.21**	-.17*	-.14*	-.20**	-.03	.03	-.12	.06
IPQ: Treatment control	.17*	.16*	.05	.10	.11	-.13	-.14	-.16*
	R^2 = .26**	R^2 = .20**	R^2 = .27**	R^2 = .24**	R^2 = .12**		R^2 = .18**	
Mediator								
LMX Affect	--	--	--	--	-.06	-.03	.06	.07
LMX Loyalty	--	--	--	--	-.02	-.03	-.04	-.04
LMX Contribution	--	--	--	--	.38**	.38**	.40**	.40**
LMX Professional Respect	--	--	--	--	.09	.07	.04	-.01
					R^2 = .20**	R^2 = .23**	R^2 = .22**	R^2 = .30**

Factor and Statistics	*Dependent Variable*			
	Resilience: Control		*Resilience: Spiritual Influences*	
	Step 1	Step 2	Step 1	Step 2
Control variables				
Age	.12	.07	.07	.02
Employee gender	.04	.01	-.15*	-.15*
Frequency of interaction	.17**	.02	.11	-.00
	R^2 = .05**		R^2 = .05**	
Independent Variables				
IPQ: Timeline acute / chronic	-.02	-.03	.05	.04
IPQ: Timeline cyclical	-.05	-.05	.13*	.13
IPQ: Consequences	.00	.02	.02	.03
IPQ: Personal control	-.13	-.09	-.20**	**-.17***
IPQ: Treatment control	-.08	-.09	.01	.00
	R^2 = .09**		R^2 = .10**	
Mediator				
LMX Affect	.07	.07	.17	.13
LMX Loyalty	-.15	-.14	-.26*	-.21
LMX Contribution	.29**	.28**	.27**	.25**
LMX Professional Respect	.11	.08	.03	.03
	R^2 = .12**	R^2 = .15**	R^2 = .10**	R^2 = .14**

Note. N = 264. IPQ = Illness perception questionnaire; LMX = Leader-member exchange.
* $p < .05$; ** $p < .01$

Appendix C3

Testing Mediation Hypothesis: Perceived Disability -- > LMX -- > Presenteeism: Employee Perspective (Study1)

Factor and Statistics	*Mediator*				*Dependent variable*			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*	*Presenteeism: Completing Work*		*Presenteeism: Avoiding Distractions*	
					Step 1	Step 2	Step 1	Step 2
Control variables								
Age	.10	.10	.19**	.13*	-.14*	-.11	-.06	-.05
Education	.08	.04	.03	.09	-.09	.05	-.17**	-.07
Lost time	-.16**	-.17**	-.16**	-.13*	.14*	.03	.21**	-.02
	R^2 = .23**	R^2 = .17**	R^2 = .28**	R^2 = .21**	R^2 = .05**		R^2 = .07	
Independent Variables								
IPQ: Timeline acute / chronic	-.06	-.04	.03	-.02	-.15*	-.14*	-.04	-.04
IPQ: Timeline cyclical	.01	-.05	-.01	-.05	-.07	-.07	.07	.06
IPQ: Consequences	-.12	-.14*	-.05	-.10	.40**	.39**	.69**	.68**
IPQ: Personal control	-.21**	-.17*	-.14*	-.20**	.18**	.16**	.07	.06
IPQ: Treatment control	.17*	.16*	.05	.10	-.06	-.06	-.01	-.01
	R^2 = .26**	R^2 = .20**	R^2 = .27**	R^2 = .24**	R^2 = .19**		R^2 = .52**	
Mediator								
LMX Affect	--	--	--	--	.01	.02	-.02	-.05
LMX Loyalty	--	--	--	--	-.04	-.02	.05	.15
LMX Contribution	--	--	--	--	-.01	-.03	.20*	.12
LMX Professional Respect	--	--	--	--	-.11	-.07	-.31**	-.22**
					R^2 = .07*	R^2 = .20**	R^2 = .12**	R^2 = .54**

Note. N = 264. IPQ = Illness perception questionnaire; LMX = Leader-member exchange.
* $p < .05$; ** $p < .01$

Appendix C4

Testing Mediation Hypothesis: Perceived Disability -- > LMX -- > Job Satisfaction: Employee Perspective (Study1)

Factor and Statistics	*Mediator*				*Dependent Variable*	
					Job Satisfaction	
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*	Step 1	Step 2
Control variables:						
Age	.10	.10	.19**	.13*	.16**	.10*
Frequency of interaction	.44**	.38**	.46**	.41**	.23**	-.03
Education	.08	.04	.03	.09	-.14*	-.01
	R^2 = .23**	R^2 = .17**	R^2 = .28**	R^2 = .21**	R^2 = .10**	
Independent Variables						
IPQ: Timeline acute / chronic	-.06	-.04	.03	-.02	-.08	-.06
IPQ: Timeline cyclical	.01	-.05	-.01	-.05	-.11	-.10
IPQ: Consequences	-.12	-.14*	-.05	-.10	-.08	-.03
IPQ: Personal control	-.21**	-.17*	-.14*	-.20**	-.17*	**-.06**
IPQ: Treatment control	.17*	.16*	.05	.10	.05	-.03
	R^2 = .26**	R^2 = .20**	R^2 = .27**	R^2 = .24**	R^2 = .17**	
Mediator						
LMX Affect	--	--	--	--	.31**	.32**
LMX Loyalty	--	--	--	--	.11	.10
LMX Contribution	--	--	--	--	-.04	.01
LMX Professional Respect	--	--	--	--	.20*	.15
					R^2 = .35**	R^2 = .38**

Note. N = 264. IPQ = Illness perception questionnaire; LMX = Leader-member exchange.
* $p < .05$; ** $p < .01$

Appendix C5

Testing Mediation Hypothesis: Perceived Disability -- > LMX -- > Job Accommodation: Supervisor Perspective (Study2)

Factor and Statistics	*Mediator*				*Dependent variable*			
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*	*JAS: Modified Physical Workload*		*JAS: Modified Work Environment*	
					Step 1	Step 2	Step 1	Step 2
Control variables:								
Supervisor gender	-.10	-.06	-.12	-.14	-.07	-.06	-.11	-.09
Employee gender	-.06	.04	-.01	.02	.00	.04	-.09	-.07
Work/home	.11	.12	.13	.10	.06	.07	.08	-.11
Frequency of interaction	.43**	.40**	.38**	.43**	.10	-.02	.09	-.02
	R^2 = .23**	R^2 = .18**	R^2 = .19**	R^2 = .22**	R^2 = .02		R^2 = .04	
Independent Variables								
IPQ: Timeline acute / chronic	.11	.05	.01	.07	.08	.05	.08	.08
IPQ: Timeline cyclical	.07	.15*	.17*	.18**	.03	.01	.16*	.11
IPQ: Consequences	-.08	-.06	-.06	-.10	.11	.14	.08	.09
IPQ: Personal control	.16*	.22**	.20**	.17*	.07	.05	.16*	.12
IPQ: Treatment control	-.04	-.04	-.05	-.04	-.13	-.12	-.15	-.14
	R^2 = .26**	R^2 = .24**	R^2 = .24**	R^2 = .28**	R^2 = .06		R^2 = .11**	
Mediator								
LMX Affect	--	--	--	--	.22	.23	-.09	-.07
LMX Loyalty	--	--	--	--	-.13	-.14	.03	.01
LMX Contribution	--	--	--	--	-.09	-.10	.21	.19
LMX Professional Respect	--	--	--	--	.22	.23	.11	.09
					R^2 = .08	R^2 = .11*	R^2 = .10**	R^2 = .15**

Factor and Statistics	*Dependent variable*					
	JAS: Modified Work Schedule		*JAS: Alternate Duties*		*JAS: Arranged Work Assistance*	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Control variables:						
Supervisor gender	.11	.13	.09	.09	-.15	-.16*
Employee gender	-.25**	-.24**	.00	.02	-.07	-.06
Work/home	-.03	-.01	-.11	-.07	.13	.20**
Frequency of interaction	-.03	-.14	.02	-.07	.23**	.16*
	R^2 = .05		R^2 = .02		R^2 = .12**	
Independent Variables						
IPQ: Timeline acute / chronic	-.14	-.18*	-.11	-.14	-.16*	-.19*
IPQ: Timeline cyclical	.18*	.16*	.09	.07	.04	.00
IPQ: Consequences	.20**	.22*	.19*	.22**	.12	.15*
IPQ: Personal control	.25**	.21*	.17*	.13	.07	.03
IPQ: Treatment control	-.14	-.13	-.17*	-.16	-.24**	-.23**
	R^2 = .16**		R^2 = .10*		R^2 = .21**	
Mediator						
LMX Affect	.15	.21	.14	.18	.07	.10
LMX Loyalty	.11	.07	.08	.06	-.05	-.04
LMX Contribution	-.04	-.10	-.16	-.20	-.11	-.15
LMX Professional Respect	.09	.11	.17	.20	.32*	.35*
	R^2 = .11**	R^2 = .22**	R^2 = .07	R^2 = .15**	R^2 = .17**	R^2 = .27**

Note. N = 224. Experience with injury = Supervisor has personal experience with musculoskeletal injury (0 = Yes; 1 = No); IPQ = Illness perception questionnaire; JAS = Job accommodation scale; LMX = Leader-member exchange; Work/home = Injury occurred at work (0 = Yes; 1 = No).

* $p < .05$; ** $p < .01$

Appendix C6

Testing Mediation Hypothesis: Perceived Disability -- > LMX -- > Performance: Supervisor Perspective (Study2)

Factor and Statistics	*Mediator*				*Dependent variable:*	
					Performance	
	LMX Affect	*LMX Loyalty*	*LMX Contribution*	*LMX Professional Respect*	Step 1	Step 2
Control variables:						
Age	.06	.10	.10	.16*	.11	-.02
Work/home	.11	.12	.13*	.11	.16*	.06
Frequency of interaction	.41	.38**	.36**	.39**	.41**	.16**
Experience with injury	-.05	-.07	.11	-.13*	-.14*	-.03
	R^2 = .21**	R^2 = .19**	R^2 = .20**	R^2 = .24**	R^2 = .26**	
Independent Variables						
IPQ: Timeline acute / chronic	.11	.05	.01	.07	.10	.09
IPQ: Timeline cyclical	.07	.15*	.17*	.18**	.06	-.05
IPQ: Consequences	-.08	-.06	-.06	-.10	-.25**	-.22**
IPQ: Personal control	.16*	.22**	.20**	.17*	.07	-.07
IPQ: Treatment control	-.04	-.04	-.05	-.04	-.07	-.05
	R^2 = .26**	R^2 = .24**	R^2 = .24**	R^2 = .28**	R^2 = .31**	
Mediator						
LMX Affect	--	--	--	--	.03	.00
LMX Loyalty	--	--	--	--	-.18	-.16
LMX Contribution	--	--	--	--	.38**	.42**
LMX Professional Respect	--	--	--	--	.42**	.42**
					R^2 = .58**	R^2 = .64**

Note. N = 224. Experience with injury = Supervisor has personal experience with musculoskeletal injury (0 = Yes; 1 = No); IPQ = Illness perception questionnaire; LMX = Leader-member exchange; Work/home = Injury occurred at work (0 = Yes; 1 = No).

* $p < .05$; ** $p < .01$

Appendix D1

Bootstraps for the Moderated Mediation of IPQ Consequences and Empathy on Job Accommodation through Leader-Member Exchange: Employee Perspective (Study 1)

		Outcome							
		JAS: Modified Work Schedule				*JAS: Alternate Duties*			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	-.0349	.0365	-.1389	.0080	-.0127	.0223	-.0845	.0101
	Medium	-.0270	.0223	-.0875	.0005	-.0099	.0145	-.0518	.0082
	High	-.0192	.0204	-.0809	.0071	-.0070	.0116	-.0477	.0059
LMX Loyalty	Low	-.0012	.0194	-.0495	.0351	.0004	.0180	-.0385	.0393
	Medium	-.0010	.0150	-.0341	.0280	.0003	.0140	-.0280	.0298
	High	-.0008	.0126	-.0314	.0231	.0003	.0119	-.0235	.0266
LMX Professional respect	Low	.0058	.0159	-.0191	.0484	-.0140	.0152	-.0607	.0042
	Medium	.0045	.0115	-.0153	.0337	-.0107	.0109	-.0434	.0032
	High	.0031	.0090	-.0091	.0306	-.0074	.0093	-.0391	.0029

Note. N=264. JAS = Job accommodation scale; LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D2

Bootstraps for the Moderated Mediation of IPQ Personal Control and Empathy on Job Accommodation through Leader-Member Exchange: Employee Perspective (Study 1)

		JAS: Arranged Work Assistance			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	-.0059	.0201	-.0772	.0149
	Medium	-.0025	.0102	-.0387	.0090
	High	.0008	.0091	-.0134	.0264
LMX Loyalty	Low	.0060	.0470	-.0974	.0877
	Medium	.0029	.0237	-.0458	.0513
	High	-.0003	.0210	-.0415	.0445
LMX Contribution	Low	-.0005	.0139	-.0335	.0265
	Medium	.0018	.0081	-.0070	.0310
	High	.0040	.0112	-.0093	.0423
LMX Professional respect	Low	-.0026	.0235	-.0642	.0360
	Medium	-.0011	.0115	-.0331	.0175
	High	.0003	.0076	-.0115	.0223

Note. N=264. JAS = Job accommodation scale; LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D3

Bootstraps for the Moderated Mediation of IPQ Treatment Control and Empathy on Job Accommodation through Leader-Member Exchange: Employee Perspective (Study 1)

		Outcome			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
			JAS: Modified Physical Workload		
	Low	**-.0474**	**.0306**	**-.1277**	**-.0041**
LMX Professional respect	Medium	-.0361	.0207	-.0879	-.0048
	High	-.0247	.0199	-.0760	.0052
	Low	-.0054	.0210	-.0817	.0144
LMX Contribution	Medium	-.0079	.0152	-.0540	.0107
	High	-.0104	.0165	-.0572	.0132
			JAS: Modified Work Schedule		
	Low	**-.0316**	**.0179**	**-.0745**	**-.0035**
LMX Professional respect	Medium	-.0240	.0121	-.0525	-.004
	High	-.0164	.0128	-.0464	.0046
			JAS: Alternate Duties		
	Low	**-.0301**	**.0175**	**-.0729**	**-.0029**
LMX Professional respect	Medium	-.0229	.0119	-.0502	-.0037
	High	-.0157	.0122	-.0448	.0042

Note. N=264. JAS = Job accommodation scale; LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.
Bold figures suggest significant indirect effect.

Appendix D4

Bootstraps for the Moderated Mediation of IPQ Consequences and Empathy on Resilience through Leader-Member Exchange: Employee Perspective (Study 1)

		Resilience: Positive Acceptance to Change			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	-.0071	.0127	-.0476	.0057
	Medium	-.0055	.0085	-.0305	.0046
	High	-.0039	.0071	-.0300	.0032
LMX Loyalty	Low	-.0047	.0130	-.0390	.0157
	Medium	-.0039	.0100	-.0275	.0145
	High	-.0031	.0087	-.0276	.0100
LMX Professional respect	Low	-.0157	.0131	-.0561	.0004
	Medium	-.0119	.0086	-.0357	-.0001
	High	-.0082	.0077	-.0321	.0020

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D5

Bootstraps for the Moderated Mediation of IPQ Personal Control and Empathy on Resilience through Leader-Member Exchange: Employee Perspective (Study 1)

Mediator	*Moderator*	*Outcome*			
		Estimate of the indirect effect	*Standard error*	*LLCI*	*ULCI*
		Resilience: Positive Acceptance to Change			
LMX Affect	Low	-.0024	.0096	-.0396	.0076
	Medium	-.0010	.0049	-.0184	.0045
	High	.0003	.0044	-.0066	.0129
LMX Loyalty	Low	-.0004	.0092	-.0234	.0161
	Medium	-.0002	.0047	-.0121	.0082
	High	.0000	.0041	-.0087	.0093
LMX Contribution	Low	.0030	.0377	-.0787	.0715
	Medium	-.0103	.0205	-.0563	.0257
	High	-.0237	.0220	-.0730	.0165
LMX Professional respect	Low	-.0012	.0131	-.0364	.0204
	Medium	-.0005	.0063	-.0179	.0099
	High	.0001	.0041	-.0066	.0105

Mediator	*Moderator*	*Outcome*			
		Estimate of the indirect effect	*Standard error*	*LLCI*	*ULCI*
		Resilience Control			
LMX Affect	Low	-.0011	.0106	-.0359	.0137
	Medium	-.0005	.0055	-.0185	.0073
	High	.0002	.0047	-.0079	.0126
LMX Loyalty	Low	-.0011	.0134	-.0336	.0235
	Medium	-.0005	.0068	-.0179	.0111
	High	.0001	.0060	-.0121	.0143
LMX Contribution	Low	.0023	.0296	-.0579	.0628
	Medium	-.0080	.0160	-.0449	.0204
	High	-.0184	.0178	-.0629	.0095
LMX Professional respect	Low	-.0103	.0184	-.0654	.0125
	Medium	-.0045	.0092	-.0361	.0054
	High	.0012	.0064	-.0066	.0237
		Resilience: Spiritual Influences			
LMX Affect	Low	-.0105	.0246	-.0938	.0171
	Medium	-.0045	.0131	-.0495	.0104
	High	.0015	.0120	-.0178	.0339
LMX Loyalty	Low	-.0041	.0343	-.0878	.0541
	Medium	-.0019	.0176	-.0468	.0280
	High	.0002	.0154	-.0288	.0376
LMX Contribution	Low	.0036	.0457	-.0963	.0877
	Medium	-.0123	.0253	-.0729	.0288
	High	-.0282	.0272	-.0976	.0151
LMX Professional respect	Low	.0002	.0242	-.0518	.0519
	Medium	.0001	.0119	-.0242	.0265
	High	.0000	.0075	-.0177	.0149

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D6

Bootstraps for the Moderated Mediation of IPQ Treatment Control and Empathy on Resilience through Leader-Member Exchange: Employee Perspective (Study 1)

		Outcome			
Mediator	*Moderator*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
		Resilience: Trust in Instincts			
LMX Contribution	Low	-.0232	.0420	-.1087	.0603
	Medium	-.0341	.0210	-.0795	.0033
	High	**-.0449**	**.0277**	**-.1137**	**-.0019**
LMX Professional respect	Low	-.0043	.0109	-.0355	.0106
	Medium	-.0033	.0078	-.0247	.0082
	High	-.0023	.0060	-.0224	.0047
		Resilience: Positive Acceptance to Change			
LMX Contribution	Low	-.0200	.0396	-.1113	.0442
	Medium	-.0293	.0204	-.0766	.0040
	High	**-.0387**	**.0218**	**-.0900**	**-.0020**
LMX Professional respect	Low	-.0038	.0086	-.0287	.0077
	Medium	-.0029	.0061	-.0198	.0060
	High	-.0020	.0045	-.0171	.0035
		Resilience: Control			
LMX Contribution	Low	-.0145	.0295	-.0870	.0324
	Medium	-.0212	.0160	-.0633	.0010
	High	**-.0280**	**.0182**	**-.0771**	**-.0022**
LMX Professional respect	Low	-.0070	.0109	-.0389	.0068
	Medium	-.0053	.0078	-.0267	.0056
	High	-.0036	.0061	-.0242	.0032

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval. Bold figures suggest significant indirect effect.

Appendix D7

Bootstraps for the Moderated Mediation of IPQ Consequences and Empathy on Presenteeism through Leader-Member Exchange: Employee Perspective (Study 1)

		Outcome							
		Presenteeism: Completing Work				*Presenteeism: Avoiding Distractions*			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	.0013	.0139	-.0214	.0391	.0049	.0136	-.0128	.0480
	Medium	.0010	.0098	-.0156	.0265	.0038	.0095	-.0104	.0311
	High	.0007	.0079	-.0118	.0238	.0027	.0078	-.0058	.0316
LMX Loyalty	Low	.0022	.0138	-.0207	.0390	-.0247	.0204	-.0833	.0015
	Medium	.0019	.0105	-.0174	.0265	-.0206	.0150	-.0619	-.0007
	High	.0015	.0088	-.0123	.0254	-.0165	.0152	-.0650	.0004
LMX Professional respect	Low	.0110	.0127	-.0053	.0477	.0240	.0171	.0010	.0723
	Medium	.0084	.0094	-.0043	.0342	.0183	.0125	.0012	.0515
	High	.0058	.0081	-.0029	.0327	.0126	.0123	-.0030	.0479

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D8

Bootstraps for the Moderated Mediation of IPQ Personal Control and Empathy on Presenteeism through Leader-Member Exchange: Employee Perspective (Study 1)

		Outcome							
		Presenteeism: Completing Work				*Presenteeism: Avoiding Distractions*			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	-.0008	.0125	-.0330	.0210	.0010	.0142	-.0195	.0436
	Medium	-.0003	.0064	-.0172	.0105	.0004	.0072	-.0106	.0215
	High	.0001	.0058	-.0112	.0133	-.0001	.0063	-.0161	.0109
LMX Loyalty	Low	-.0008	.0123	-.0340	.0201	.0006	.0132	-.0215	.0362
	Medium	-.0004	.0063	-.0170	.0103	.0003	.0067	-.0107	.0192
	High	.0000	.0056	-.0111	.0132	.0000	.0058	-.0134	.0119
LMX Contribution	Low	-.0003	.0119	-.0288	.0195	.0020	.0258	-.0456	.0631
	Medium	.0011	.0071	-.0072	.0251	-.0069	.0141	-.0463	.0140
	High	.0026	.0092	-.0098	.0319	-.0158	.0177	-.0691	.0059
LMX Professional respect	Low	.0110	.0167	-.0116	.0611	**.0417**	**.0299**	**.0014**	**.1287**
	Medium	.0049	.0085	-.0049	.0341	.0184	.0172	-.0053	.0672
	High	-.0013	.0061	-.0223	.0063	-.0048	.0153	-.0428	.0223

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval. Bold figures suggest significant indirect effect.

Appendix D9

Bootstraps for the Moderated Mediation of IPQ Treatment Control and Empathy on Presenteeism through Leader-Member Exchange: Employee Perspective (Study 1)

		Outcome							
		Presenteeism: Completing Work				*Presenteeism: Avoiding Distractions*			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Contribution	Low	.0029	.0145	-.0111	.0569	-.0150	.0299	-.0903	.0321
	Medium	.0042	.0108	-.0096	.0363	-.0221	.0171	-.0695	.0008
	High	.0056	.0119	-.0124	.0390	**-.0291**	**.0207**	**-.0888**	**-.0013**
LMX Professional respect	Low	.0171	.0155	-.0011	.0652	**.0405**	**.0254**	**.0042**	**.1067**
	Medium	.0130	.0108	-.0006	.0441	.0308	.0170	.0042	.0720
	High	.0089	.0091	-.0018	.0388	.0211	.0168	-.0052	.0635

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval. Bold figures suggest significant indirect effect.

Appendix D10

Bootstraps for the Moderated Mediation of IPQ Consequences and Empathy on Job Satisfaction through Leader-Member Exchange: Employee Perspective (Study 1)

		Job Satisfaction			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	-.0199	.0203	-.0759	.0043
	Medium	-.0155	.0123	-.0479	.0000
	High	-.0110	.0115	-.0443	.0048
LMX Loyalty	Low	-.0078	.0136	-.0484	.0107
	Medium	-.0065	.0102	-.0317	.0105
	High	-.0052	.0086	-.0307	.0068
LMX Professional respect	Low	-.0145	.0134	-.0553	.0014
	Medium	-.0111	.0096	-.0393	.0008
	High	-.0076	.0085	-.0353	.0021

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D11

Bootstraps for the Moderated Mediation of IPQ Personal Control and Empathy on Job Satisfaction through Leader-Member Exchange: Employee Perspective (Study 1)

		Job Satisfaction			
Mediator	*Moderator: Empathy*	*Estimate of the indirect effect*	*Standard error*	*LLCI*	*ULCI*
LMX Affect	Low	-.0113	.0190	-.0609	.0178
	Medium	-.0049	.0104	-.0317	.0116
	High	.0016	.0100	-.0195	.0226
LMX Loyalty	Low	.0011	.0119	-.0163	.0296
	Medium	.0005	.0059	-.0084	.0161
	High	-.0001	.0052	-.0123	.0100
LMX Contribution	Low	.0000	.0079	-.0125	.0164
	Medium	.0001	.0048	-.0080	.0108
	High	.0001	.0065	-.0126	.0153
LMX Professional respect	Low	-.0166	.0172	-.0696	.0038
	Medium	-.0073	.0090	-.0371	.0028
	High	.0019	.0072	-.0077	.0243

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval.

Appendix D12

Bootstraps for the Moderated Mediation of IPQ Treatment Control and Empathy on Job Satisfaction through Leader-Member Exchange: Employee Perspective (Study 1)

Mediator	*Moderator: Empathy*	*Job Satisfaction*			
		Estimate of the indirect effect	*Standard error*	*LLCI*	*ULCI*
LMX Contribution	Low	-.0031	.0134	-.0483	.0072
	Medium	-.0046	.0093	-.0334	.0057
	High	-.0061	.0095	-.0333	.0076
LMX Professional respect	Low	**-.0420**	**.0249**	**-.1018**	**-.0031**
	Medium	-.0319	.0164	-.0692	-.0047
	High	-.0218	.0164	-.0597	.0062

Note. N=264. LLCI = Low level confidence interval; LMX = Leader-member exchange; ULCI = Upper level confidence interval. Bold figures suggest significant indirect effect.

Appendix E1

Questionnaire for the Employees Perspective (Study 1)

Stanford Presenteeism Scale (SPS-6)

Please describe your work experiences **in the past month**. These experiences may be affected by many environmental as well as personal factors, and may change from time to time. For each of the following statements, please check one of the following responses to show your agreement or disagreement with the statement in describing your work experiences **in the past month**.

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

1. Because of my injury, the stresses of my job were much harder to handle.
2. Despite having my injury, I was able to finish hard tasks in my work.
3. My injury has distracted me from taking pleasure in my work.
4. I felt hopeless about finishing certain work tasks, due to my injury.
5. At work, I was able to focus on achieving my goals despite my injury.
6. Despite having my injury, I felt energetic enough to complete all my work.

LMX-MDM Questionnaire

The following statements are about the **relationship between you and your current immediate supervisor**. Please indicate the degree of your **agreement or disagreement** with each statement by **selecting a radio button** to the right of the statement, based on the given scale. There are no right or wrong answers

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

1. I like my supervisor very much as a person.
2. My supervisor is the kind of person one would like to have as a friend.
3. My supervisor is a lot of fun to work with.
4. My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.
5. My supervisor would come to my defense if I were “attacked” by others.

6. My supervisor would defend me to others in the organization if I made an honest mistake.
7. I do work for my supervisor that goes beyond what is specified in my job description.
8. I am willing to apply extra efforts, beyond those normally required, to meet my supervisor's work goals.
9. I do not mind working my hardest for my supervisor.
10. I am impressed with my supervisor's knowledge of his/her job.
11. I respect my supervisor's knowledge of and competence on the job.
12. I admire my supervisor's professional skills.

CD-RISC Resilience Scale

Please indicate the degree of your **agreement or disagreement** with each statement by **selecting a radio button** to the right of the statement, based on the scale given below. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

1. I am able to adapt to change.
2. I have close and secure relationships.
3. Sometimes fate or God can help.
4. I can deal with whatever comes.
5. Past success gives me confidence for new challenges.
6. I see the humorous side of things.
7. Coping with stress strengthens.
8. I tend to bounce back after illness or hardship.
9. Things happen for a reason.
10. I give my best effort no matter what.
11. I can achieve my goals.
12. When things look hopeless, I don't give up.
13. I know where to turn for help.
14. Under pressure, I focus and think clearly.
15. I prefer to take the lead in problem solving.
16. I am not easily discouraged by failure.
17. I think of myself as a strong person.
18. I make unpopular or difficult decisions.
19. I can handle unpleasant feelings.
20. I have to act on a hunch.
21. I have a strong sense of purpose.
22. I am in control of my life.
23. I like challenges.
24. You work to attain your goals.
25. I should take pride in my achievements.

Revised Illness Perception Questionnaire (R-IPQ)

For each of the following statements, please mark one of the following answers to show your agreement or disagreement with the statement in describing your work experiences in the past month. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

Timeline acute/chronic

1. My injury will last a short time
2. My injury is likely to be permanent rather than temporary
3. My injury will last for a long time
4. My injury will pass quickly
5. I expect to have this injury for the rest of my life
6. My injury will improve in time

Timeline cyclical

1. The symptoms of my injury change a great deal from day to day
2. The symptoms of my injury come and go in cycles
3. My injury is very unpredictable
4. I go through cycles in which my injury gets better and worse

Consequences

1. My injury is a serious condition
2. My injury has major consequences for my job
3. My injury does not have much effect on my job
4. My injury strongly affects how the others see me
5. My injury has serious financial consequences
6. My injury causes difficulties for those who are close to me

Personal control

1. There is a lot that I can do to control my symptoms
2. What I do can determine whether my injury gets better or worse
3. The course of my injury depends on me
4. Nothing I do will affect my injury
5. I have the power to influence my injury
6. My actions will have no effect on the outcome of my injury

Treatment control

1. There is very little that can be done to improve my injury
2. My treatment will be effective in curing my injury
3. The negative effects of my injury can be prevented or avoided by my treatment
4. My treatment can control my injury
5. There is nothing that can help my injury

Perception of Leader Empathy

For each of the following statements, please mark one of the following answers to show your agreement or disagreement with the statement. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Neutral
4=Agree
5=Strongly Agree

1. My supervisor is a good observer of others' emotions
2. My supervisor is sensitive to the feelings and emotions of others
3. My supervisor has a good understanding of the emotions of people around him/her
4. My supervisor always knows his/her subordinates' emotions from their behavior

Job Satisfaction

For each of the following statements, please mark one of the following answers to show your agreement or disagreement with the statement. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Neutral
4=Agree
5=Strongly Agree

1. All in all, I am satisfied with my job
2. Compared to most jobs, mine is a pretty good one

Job Accommodation Scale (JAS)

Please indicate whether or not your current immediate supervisor has or is likely to offer the following job modifications to you. For each of the following statements, please mark one of the following answers, where 1 is "very unlikely" and 7 is "has already offered".

In order to accommodate my injury, my supervisor has modified (or is likely to modify) my job duties:

1. To help me avoid lifting heavy objects
2. To help me avoid awkward postures.
3. To limit pushing or pulling heavy objects
4. To help me avoid prolonged periods of standing
5. To help me avoid twisting or bending
6. To help me avoid working with objects at floor level
7. By rearranging my work space to be more comfortable
8. By altering the height of my work surface

9. By providing special equipment or tools to make work less painful
10. By providing a more comfortable place to sit
11. By rotating my job tasks
12. To help me avoid long periods of sitting
13. So I work at different times
14. So I work shorter days
15. So I can take more breaks and rest periods
16. By having me work at another job temporarily
17. By replacing my normal job tasks with easier things
18. By moving me to a different site or location
19. By asking coworkers to assist me as needed
20. By arranging for others to help
21. By finding someone else to do the heavy work

Satisfaction with Job Accommodation

The following statements are about provided job modifications resulted from musculoskeletal injury. Please mark one of the following answers to show your agreement or disagreement with the statement. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

1. All in all, I am satisfied with provided job modifications
2. My current supervisor could have done more to provide me with appropriate job modifications
3. My current supervisor has done everything she/he could to accommodate me after my injury

Demographic Questions

Please specify what musculoskeletal injury do you have?

_____
_____

Please describe your injury:

_____

What is your age?

What is you gender?

- o Male
- o Female
- o Other (please specify):_____

What is your supervisor gender?

- o Male
- o Female
- o Other (please specify):_____

What is your race?

White/Anglo or European
Black/African
Asian, Pacific Islander
Aboriginal
Bi-racial or multi-racial
Other (please specify)

What is your current occupation?_____

What is the highest level of education you have completed?

High school or below
College diploma
Bachelors
Masters
Doctorate
In progress: _____

How long have you worked with your current supervisor?

- o Less than 6 month
- o 6 months to 1 year
- o 1 to 2 years
- o 2 to 3 years
- o 3 to 5 years
- o 5 to 8 years
- o 8 to 12 years
- o More than 12 years

Is your current immediate supervisor the same as the supervisor you had before you were injured?

- o Yes
- o No

Which of the following most closely matches your job title?

Intern
Entry level
Analyst/Associate
Manager
Senior manager
Director
Vice president
C level executive (CIO, CTO, COO, CMO, etc.)
President or CEO
Other (please specify)

About how often do you usually communicate with your current immediate supervisor?

1 Not at all 2 3 4 5 6 7 Always

How many hours per week do you usually work at your job?

35 hours a week or more
Less than 35 hours a week
I am not currently employed

How many years have you been with your current employer?

- Less than 6 month
- 6 months to 1 year
- 1 to 2 years
- 2 to 3 years
- 3 to 5 years
- 5 to 8 years
- 8 to 12 years
- More than 12 years

How long ago was your most recent musculoskeletal injury?

- Less than 1 month
- From 1 to 3 months
- From 3 to 6 months
- From 6 months to 1 year
- From 1 to 2 years
- More than 2 years

How long were you off work with your most recent musculoskeletal injury?

- 1 day
- 2 days to 1 week
- 2 weeks to 1 month
- 1 to 3 months
- 3 to 6 months
- 6 months to 1 year
- More than 1 year

Did your most recent musculoskeletal injury occur at work?

- Yes
- No

THANK YOU FOR YOUR PARTICIPATION!

For any questions regarding this study, its purpose or procedures, or to receive the research results, please feel free to contact Zhanna Lyubykh at zhanna.lyubykh@uleth.ca

Appendix E2

Questionnaire for the Supervisor Perspective (Study 2)

Perceived Disability. Injured Worker IPQ-R

The following statements are about **your subordinate's injury**. Please indicate the degree of your **agreement or disagreement** with each statement by **selecting a radio button** to the right of the statement, based on the given scale. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

Timeline acute / chronic:

1. My subordinate's injury will last a short time.
2. My subordinate's injury is likely to be permanent rather than temporary.
3. My subordinate's injury will last for a long time.
4. My subordinate's injury will pass quickly.
5. I expect my subordinate will have this injury for the rest of my life.
6. My subordinate's injury will improve in time.

Timeline cyclical:

7. The symptoms of my subordinate's injury change a great deal from day to day.
8. The symptoms of my subordinate's injury come and go in cycles.
9. My subordinate's injury is very unpredictable.
10. My subordinate goes through cycles in which his/her injury gets better and worse.

Consequences:

11. My subordinate's injury is a serious condition.
12. My subordinate's injury has major consequences for his/her job.
13. My subordinate's injury does not have much effect on his/her job.
14. My subordinate's injury strongly affects the others see him/her.
15. My subordinate's injury has serious financial consequences for him/her.
16. My subordinate's injury causes difficulties for people he/she works with.

Personal control:

17. There is a lot that my subordinate can do to control his/her symptoms.
18. What my subordinate does can determine whether his/her injury gets better or worse.
19. The course of my subordinate's injury depends on him/her.
20. Nothing my subordinate does will affect his/her injury.
21. My subordinate has the power to influence his/her injury.
22. My subordinate's actions will have no affect on the outcome of his/her injury.

Treatment control:

23. There is very little that can be done to improve my subordinate's injury.

24. My subordinate's treatment will be effective in curing his/her injury.
25. The negative effects of my subordinate's injury can be prevented or avoided by his/her treatment.
26. My subordinate's treatment can control his/her injury.
27. There is nothing that can help my subordinate's injury.

LMX-MDM Questionnaire

For each of the following statements, please mark one of the following answers to show your agreement or disagreement with the statement, based on the given scale. There are no right or wrong answers. There are no right or wrong answers

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree

1. I like this employee very much as a person
2. This employee is the kind of person that one would like to have as a friend
3. This employee is a lot of fun to work with.
4. This employee defends my work, actions to the superior even without complete knowledge of the issue.
5. This employee would come to my defense if I were "attacked" by others.
6. This employee would defend me to others in the organization if I make an honest mistake.
7. This employee does work for me that go beyond what is specified in his/her job description.
8. This employee is willing to apply extra efforts, beyond those normally required, to meet my work goals.
9. This employee does not mind working his/her hardest for me.
10. I am impressed with this employee's knowledge of his/her job.
11. I respect this employee's knowledge of and competence on the job.
12. I admire this employee's professional skills.

Basic Empathy Scale (BES)

Please indicate the degree of your **agreement or disagreement** with each statement by **selecting a radio button** to the right of the statement. There are no right or wrong answers.

1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree

7=Strongly Agree

1. My friends' emotions don't affect me much.
2. After being with a friend who is sad about something, I usually feel sad.
3. I can understand my friend's happiness when she/he does well at something.
4. I get caught up in other people's feelings easily.
5. Other people's feelings don't bother me at all.
6. When someone is feeling 'down' I can usually understand how they feel.
7. My friend's unhappiness doesn't make me feel anything.
8. I am not usually aware of my friends' feelings.
9. I have trouble figuring out when my friends are happy.

Job Accommodation Scale (JAS)

Please indicate whether or not you have or are likely to offer **the following job modifications to your injured employee**. There are no right or wrong answers.

1=Very Unlikely
2=Unlikely
3=Possibly
4=Probably
5=Likely
6=Very Likely
7=Has Already Offered

Modify physical workload:

1. Avoid lifting heavy objects.
2. Avoid awkward postures.
3. Limit pushing or pulling of heavy objects.
4. Avoid prolonged periods of standing.
5. Avoid twisting or bending.
6. Avoid working with objects at floor level.

Modify work environment

7. Rearrange workplace to be more comfortable.
8. Alter height of work surface.
9. Use special equipment or tools to make work less painful.
10. Find a more comfortable place to sit.
11. Rotate between job tasks.
12. Reduce long periods of prolonged sitting.

Modify work schedule

13. Change work time.
14. Shorten work days.
15. Arrange more breaks and rest periods.

Find alternate duties

16. Assign to another job temporarily.
17. Replace normal job tasks with easier things.
18. Move to a different site or location.

Arrange for assistance

19. Ask coworkers to assist as needed.
20. Arrange for others to help.
21. Find someone else to do the heavy work.

Performance Evaluation

Listed below are various work behaviors of a worker in the workplace. Please read each statement carefully and decide how FREQUENTLY your injured employee demonstrates these behaviors at work. Please indicate the number of your choice by marking the appropriate answer.

Your injured employee:

1. Adequately completes assigned duties
2. Fulfills responsibilities specified in job description
3. Performs tasks that are expected of him/her
4. Meets formal performance requirements of the job
5. Engages in activities that will directly affect his/her performance evaluation
6. Neglects aspects of the job he/she is obligated to perform
7. Fails to perform essential duties

Demographic Questions

What is your age?

What is your gender?

Male
Female
Other (please specify):_____

What is your injured employee gender?

Male
Female
Other (please specify):_____

What is your race?

White/Anglo or European
Black/African
Asian, Pacific Islander
Aboriginal
Bi-racial or multi-racial
Other (please specify):_____

In what sector are you currently employed?

What is the highest level of education you have completed?

High School or below
College diploma
Bachelors
Masters
Doctorate
In progress (please specify): _____

Did your employee's injury occur at work?
Yes No I don't know

How long have you worked with your injured employee?
- o Less than 6 months
- o 6 months to 1 year
- o 1 to 2 years
- o 2 to 3 years
- o 3 to 5 years
- o 5 to 8 years
- o 8 to 12 years
- o More than 12 years

About how often do you usually communicate with your injured employee?
1 Not at all 2 3 4 5 6 7 Always

How does your present job / position fit into the following staff categories?
- o Top level management
- o Middle level management
- o Lower level management

How many years have you been with your present organization?
- o Less than 6 months
- o 6 months to 1 year
- o 1 to 2 years
- o 2 to 3 years
- o 3 to 5 years
- o 5 to 8 years
- o 8 to 12 years
- o More than 12 years

How many employees are you currently supervising?
- o 1
- o 2-3
- o 4-6
- o 6-10
- o 10-15
- o 15 or more

I personally have experienced a musculoskeletal injury:

Yes No

My relative is experiencing or has experienced musculoskeletal injury:
Yes No

THANK YOU FOR YOUR PARTICIPATION!

For any questions regarding this study, its purpose or procedures, or to receive the research results, please feel free to contact Zhanna Lyubykh at zhanna.lyubykh@uleth.ca

Controls for Common Method Variance (Study 1 and Study 2)

Social Desirability

This is not a test of your ability. It simply asks you to assess, as accurately as possible, your attitudes and behaviors toward others. Please indicate the number of your choice by selecting the appropriate number on the right of each statement.

1=Strongly Disagree=SD
2=Disagree=D
3=Slightly Disagree=SLD
4=Neutral=N
5=Slightly Agree=SLA
6=Agree=A
7=Strongly Agree=SA

		SD	D	SLD	N	SLA	A	SA
1	I never hesitate to go out of my way to help someone in trouble.	1	2	3	4	5	6	7
2	I have never intensely disliked anyone.	1	2	3	4	5	6	7
3	No matter whom I am talking to, I am always a good listener.	1	2	3	4	5	6	7
4	I am always willing to admit when I make a mistake.	1	2	3	4	5	6	7
5	I always try to practice what I preach.	1	2	3	4	5	6	7
6	I do not find it difficult to get along with loud-mouthed people.	1	2	3	4	5	6	7

PANAS

The following statements are about **how you felt** in general. Please indicate **how frequently** you generally felt this way **during the past year.** Please write the number of your choice, based on the scale given below.

1 --- Never
2 --- Almost never
3 --- Seldom
4 --- Sometimes
5 --- Usually
6 --- Almost always
7 --- Always

<u>During the past year, generally you were feeling</u> ...

___(01) Determined
___(02) Ashamed

___(03) Attentive
___(04) Afraid
___(05) Alert
___(06) Upset
___(07) Nervous
___(08) Active
___(09) Hostile
___(10) Inspired