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Predictors of burnout among supply chain management professionals

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Abstract: The competitive market for supply chain management (SCM) talent has increased the importance of retaining SCM employees. Despite generally positive opinions of SCM careers, high levels of turnover among SCM professionals exist, and burnout has often been cited as a cause for turnover. Based on a survey of 104 US-based SCM professionals, and using person-environment fit as a theoretical background, this study found that burnout is increased when workers perceive a deficit in the amount of remote work permitted and when working overtime and non-traditional hours (OT/NT), whereas burnout is reduced by pay satisfaction and a perception of transformational leadership. There is also an interaction between pay satisfaction and OT/NT, with OT/NT taking precedence over pay satisfaction in driving feelings of burnout. Very few studies have addressed talent management among SCM professionals, and this study has identified insights that are relevant to managers and to future research on this subject.

Keywords: supply chain; burnout; overtime; remote work; person-environment fit; P-E; pay; leadership.

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1 Introduction

Stank et al. (2011) place talent management as the first of five pillars of the supply chain agenda, arguing that the right employees are necessary to execute a supply chain strategy. Factors that are central to SCM theory, such as trust, integration, and relationship building, fundamentally rely on having the right employees with the right mindset (McCarter and Northcraft, 2007; Lengnick-Hall et al., 2013); similarly, employees who are committed to an organisation can mitigate the barriers to effective SCM implementation (Alfalla-Luque et al., 2015). Attracting and retaining high-quality SCM talent has been difficult in recent years; supply chain roles are expanding, and salaries are increasing, resulting in a highly competitive market for SCM talent (McCrea, 2019). Securing the best employees to fill SCM positions and retaining them long-term is critical for firms, yet there is relatively little research that has addressed talent management for supply chain personnel.

Numerous studies have addressed job design issues relevant to recruiting SCM employees (Fisher et al., 2014) and retaining front line employees such as truck drivers (Swartz et al., 2017; Ji-Hyland and Allen, 2020) and warehouse workers (Min, 2004), but no such study has addressed job design issues specific to SCM professionals. The question of how to retain SCM employees is particularly important because SCM careers have changed in recent decades. Specifically, increases in outsourcing have reduced the level of manufacturing in the USA; thus, the demand for the hard analytical skills associated with manufacturing has decreased. Instead, the softer skills of relationship management and negotiation have taken their place in many SCM positions, as these skills enable the integration of suppliers and customers into supply chains (Lorentz et al., 2013). As SCM employees progress through their careers, significant gaps have been shown to exist between the demand for skills such as communication, problem solving, leadership, and big picture thinking and the supply of potential SCM employees who possess these skills (CSCMP, 2020a).

In SCM, the overall job satisfaction level appears to be relatively high, with almost 90% of SCM professionals viewing their career potential positively, and approximately 80% of SCM professionals rating their job satisfaction level as 8 or higher on a scale from 1–10 (ASCM, 2020). Despite these figures, job retention remains a challenge for supply chain managers; thus, it is important for more research to investigate the factors that reduce the likelihood of employees quitting.

A recent study found that over half of SCM professionals who voluntarily leave their positions cite stress, burnout, and overload as a major reason for their departure (CSCMP, 2020b). Burnout can be caused by many work-related factors (Maslach and Leiter, 2008) and can lead to negative physical, emotional, and work-related outcomes, including increased turnover (Golkar et al., 2014; Halbesleben and Buckley, 2004). Given the increase in opportunities available to SCM professionals, retaining employees may depend on the ability to design jobs with a focus on reducing burnout. Therefore, a study is warranted to understand the causes and consequences of burnout among SCM professionals.

Satisfaction with pay is an obvious starting point for investigating whether someone is likely to leave their job, but pay is only one of many factors at play (Williams et al., 2006). Moreover, because increasing pay increases a firm's expenses, other methods of retaining employees may be preferred. Pay is a massive consideration for firms, as compensation to employees represents 53.3% of the gross domestic product of the USA (US Bureau of Economic Analysis, 2019). Additional factors such as working overtime, working hours outside of the typical 40-hour work week, and working remotely can also affect employee burnout, with less of an impact on a firm's expenses, compared to increasing pay. Finally, transformational leadership can potentially reduce burnout with a minimal impact on the firm's expenses. Based on person-environment (P-E) fit theory, we developed several hypotheses related to these issues, and we tested them via a survey of 104 SCM professionals across the USA. The study has contributed to the SCM literature by providing insight into a complex set of relationships between these job design factors and burnout, while also offering insight for managers responsible for supply chain talent.

2 Literature review

2.1 Burnout

Maslach and Leiter (2008) described the psychological relationship between a person and their job as being on a spectrum from engagement to burnout. Burnout is defined as the “emotional depletion and loss of motivation that result from prolonged exposure to chronic emotional and interpersonal stressors on the job” (Maslach and Leiter, 2008). Employees who experience burnout can have negative consequences, including impaired social relations, cognitive impairment, emotional dysfunctions, and physical health issues (Schaufeli and Enzmann 1988; Golkar et al., 2014). Negative workplace behaviours can also result from burnout, including employees becoming less productive or increasing their absenteeism, or even quitting their jobs (Halbesleben and Buckley, 2004). Burnout can also lead to ‘workaround behaviours’, or shortcuts, which can cause quality and safety issues (Mansour and Tremblay, 2019).

Burnout can be caused by a variety of sources. Research has pointed to such issues as stress and strain (Winnubst et al., 1988), workplace violence (Duan et al., 2019), technostress (Califf and Brooks, 2020), communication overload (Cho et al., 2019), and a poor work-life balance as sources of burnout (Jia and Li, 2021). A lack of social or leader support can cause burnout (Houkes et al., 2001; Elci et al., 2018), whereas leaders may be able to reduce burnout if they can develop a strong leadership identity (Steffens et al., 2018). Maslach and Leiter (2008) identified six dimensions of jobs – workload, control, reward, community, fairness, and values – that can act as predictors of burnout, particularly if there is a mismatch between the expectations of employees and employers along these dimensions.

According to Jayaratne and Chess (1984), burnout is context specific, so the causes, consequences, and potential remedies vary depending on the idiosyncrasies of each group. Burnout has often been studied in service industries such as hotels and hospitality (Pienaar and Willemse, 2008), schools (Califf and Brooks, 2020), social work, and medical settings (e.g., Harrison et al., 2006). It has been recognised as a critical factor in service settings because of the direct impact of the employee on the service experience (Constanti and Gibbs, 2005). In the context of SCM, on the other hand, the effects of burnout may not directly affect the customer, but instead, the effects are experienced by the individual in terms of negative effects on physical and emotional health, and at the organisational level, burnout can lead to increased turnover and absenteeism. It is important, therefore, to understand the job design issues that can cause burnout among SCM employees. These issues can be further explained through P-E theory, which is covered in the next section.

2.2 Person-environment fit

The congruence between an individual and their workplace can determine their satisfaction, their performance, and whether or not they are likely to stay in a job (Dawis and Lofquist, 1984). The work environment requires that certain tasks be performed, and the individual brings skills to perform the tasks. In exchange, the individual requires compensation for work performance and certain preferred conditions, such as a safe and comfortable place to work. When both the employer and the employee are satisfied with these conditions, the employee is likely to continue his or her tenure with the employer.

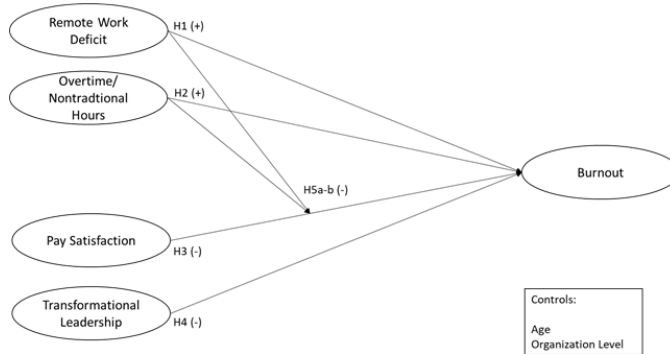
When there is an incongruence, however, employees are likely to make adjustments to their working environment, up to and including leaving the job (Dawis and Lofquist, 1984; Donohue, 2006).

Satisfaction can be determined by whether the psychological needs of the individual are being supplied by the employer, including elements such as pay and recognition (Pervin, 1989). Employees’ needs also shape their affective response to events at work. People constantly compare their preferred state to the actual events of their workplaces. When events and preferred states are in alignment, the affective state is positive (Weiss and Cropanzano, 1996). P-E fit theory can be applied to determine mismatches between employees and employers to predict burnout based on the six predictors of burnout identified by Maslach and Leiter (2008).

3 Theoretical model

We used P-E fit theory to develop a theoretical model (Figure 1) to better understand how several work-related factors affect burnout. We generated hypotheses to investigate the effects of these factors on burnout among SCM professionals. The hypotheses are presented below.

Figure 1 Theoretical model



3.1 Remote work and burnout

The concept of remote work in this paper refers to work done by an individual who is employed by an organisation, but the work is done from beyond a traditional workplace, and typically from home (Bailey et al., 2012). Remote work has been successfully used as a retention tool for SCM talent in numerous companies (CSCMP, 2020a). The level of remote work done by employees varies dramatically, with some working remotely most of the time, some employees occasionally working from home, and some who are not permitted to work remotely at all because of the nature of the work or company policy (Hafermalz and Riemer, 2021).

Research on the effectiveness of remote work has been mixed. Although working remotely can provide benefits such as temporal and spatial flexibility, remote work causes distance between co-workers, which can be viewed as a problem because of the lack of communication and interaction, which stimulates ideas, collegiality, and a sense

of belonging (Grawe and Ralston, 2019; Bartel et al., 2012). Working alone from home can result in isolation and a difficulty in maintaining a sense of social and organisational connection (Fried et al., 2013). Although remote work is touted to promote work-life balance, Van der Lippe and Lippenyi (2018) found that working from home can lead to increased work (Chung and Van der Horst, 2018) and more work-family conflict. This is important because work-family conflict has been shown to be one of the top reasons for turnover in SCM positions (CSCMP, 2020a). Suh and Lee (2017) found that remote work increases stress, which reduces job satisfaction. The challenges of remote work can be mitigated through the use of technology that connects individuals, such as instant messaging and videoconferencing platforms (Caza and Caza, 2008). Technology can provide the opportunity for improved job performance and socialisation (Malhotra and Majchrzak, 2005). Scandura and Lankau (1997) found that those who perceived flexibility in their work hours reported higher organisational commitment and job satisfaction.

Because of the increased level of control that comes with remote work, as well as a potential increase in the perception of fairness related to work conditions, we argue that if an individual perceives that the firm does not allow enough remote work, the lack of control over working conditions will be perceived as an unfulfilled need, thus increasing feelings of burnout.

Hypothesis 1 A perceived remote work deficit increases burnout

3.2 *OT/NT and burnout*

We define OT/NT as working more than 40 hours per week or outside of Monday to Friday from 8 AM to 5 PM. Focusing first on overtime, employers utilise overtime labour to enhance organisational flexibility and to make the firm more productive; but there are negative consequences for individuals and for the organisation. Rau and Triemer (2004) found that when people work overtime, they have less leisure time and less time to commit to their other responsibilities such as household work and childcare. Working overtime also resulted in obesity and adverse health behaviours (Lallukka et al., 2008). The resulting stress from working overtime can be an underlying factor in negative organisational outcomes such as poor SCM performance (Upson et al., 2007). Working overtime reduces job satisfaction (Ko and Choi, 2019), which has also been linked to negative organisational outcomes (Harrison et al., 2006).

Working non-traditional hours also can cause difficulty. Martens et al. (1999) found that individuals working rotating shifts, compressed weeks, and irregularly changing hours showed increased physical and mental health problems. These individuals are also more likely to require childcare than individuals working standard shifts, as their workdays do not align with their children's school days (Hunts and Avery, 1998). Chung and Van der Horst (2018) similarly found that flexible work hours led to increased unpaid overtime, resulting in these individuals advancing their careers more quickly than those who were unwilling or unable to work additional hours. Firth et al. (2004) argue that actively monitoring workloads is important to reducing stress. Although working overtime can potentially lead to higher income for hourly employees, these previous studies lead us to hypothesise that the effects of working overtime and non-traditional hours are negative factors overall, increasing perceived workload, reducing control, and

possibly initiating a sense of unfairness, thus increasing the employee's feelings of burnout.

Hypothesis 2 OT/NT increases burnout

3.3 Pay satisfaction and burnout

Workers expect to be compensated fairly for their time and efforts (Long et al., 2011). Pay satisfies psychological and material needs, and as such, is a critical element of an individual's needs-supplies fit in an organisation (Edwards et al., 1998). Individuals actively monitor their pay compared to other workers both internally within the business and externally in the local labour market (Long et al., 2011), and those employees who feel they are being paid well tend to have a higher view of their employer (Chhabra and Sharma, 2011). Differences in satisfaction with wages also leads to differences in overall satisfaction, productivity, and collaboration among workers (Pfeffer and Langton, 1993).

SCM professionals are largely no different from employees in other functional areas of the organisation with respect to the importance of adequate compensation to their job satisfaction. Approximately one-third of SCM professionals who recently left their positions cited inadequate pay and/or a better financial offer as their main reason for changing positions (CSCMP, 2020b). In a recent SCM employment study, just under one-third of respondents expressed satisfaction with their current positions with company politics, lack of room for advancement, and salary being the top three factors associated with job dissatisfaction (McCrea, 2019). Satisfaction with pay, therefore, positively influences an individual's attitude toward their job and toward their supervisor, shaping their overall opinion of the company's leadership. Fairness in pay and incentives has been cited as a key difficulty in recruiting and retaining employees in multinational logistics roles in China (Shi and Handfield, 2012). One of the mechanisms of this difficulty may be that a lack of fairness in the reward system can trigger burnout. We argue that among SCM employees, satisfaction with pay is crucial to an employee's feeling of fit with an organisation, and therefore reduces their feelings of burnout.

Hypothesis 3 Pay satisfaction reduces burnout

3.4 Transformational leadership and burnout

Researchers have approached the concept of leadership from many disciplines and theoretical approaches. Leadership is defined as a "process of interactive influence that occurs when, in a given context, some people accept someone as their leader to achieve common goals" (Silva, 2016). Although leadership has been studied in the context of SCM, the focus is typically on leading the networks of firms that form supply chains (Sharif and Irani, 2012; Mokhtar et al., 2019), rather than internal leadership. Research on leadership of internal supply chain employees has been rare, despite the importance of leadership as a management topic.

Leadership research has focused on leader characteristics (Bolden et al., 2003), leader behaviours (Day and Antonakis, 2012), as well as dyadic relationships between leaders and followers (Dansereau et al., 1975). The most prominent leadership concept, however, is the dichotomy of transactional and transformational leadership styles (Burns 1978). Transactional leaders focus on communicating requirements and specifying the rewards gained for completing the requirements. Transformational leaders, on the other hand, are

able to transform a follower's goals so that they align with the goals of the organisation, thereby engaging a follower's sense of self-worth, empowering them, and motivating them to work in the interests of the organisation (Yuki et al., 2002). Transformational leadership has often been shown to be an effective form of leadership (Lowe et al., 1996), resulting in more satisfied and effective employees (Bass, 1985).

An employee may be driven away by a negative relationship with a manager or a negative attitude towards a company's leadership team (Denis et al., 2012). Management may also indirectly cause an individual to quit. Many issues have been cited in research that describe the reasons for employees' negative feelings, and it is a firm's leadership that is responsible for setting and maintaining those conditions (Waldman et al., 2015). Conversely, a manager that reacts to individual needs can positively shape a follower's goals to achieve alignment along the six dimensions of work, thus ensuring a better fit between the individual and the organisation and reducing feelings of burnout.

Hypothesis 4 Transformational leadership reduces burnout

3.5 Interaction effects

In addition to the direct effects of pay satisfaction and OT/NT on burnout, a more complex interaction may also be at play. We previously argued that an individual who is satisfied with their pay will perceive that they are being rewarded fairly for their efforts, thus reducing feelings of burnout. We now further argue that even if an employee is satisfied with their pay, it may not be enough to overcome the negative aspects of work.

Herzberg (1964) described pay as a hygiene factor, which can reduce dissatisfaction, but is limited in its ability to increase satisfaction because other motivational factors take precedence over pay. Similarly, we argue that satisfaction with pay can reduce burnout, but when other negative work factors are present, they will outweigh the benefits of pay satisfaction. We, therefore, predict that OT/NT and a remote work deficit will outweigh pay satisfaction, leading to a negative moderation effect of both of these factors on the effects of pay satisfaction on burnout.

Hypothesis 5a Remote work deficit negatively moderates the effects of pay satisfaction on burnout

Hypothesis 5b OT/NT negatively moderates the effects of pay satisfaction on burnout

4 Methodology

A questionnaire was administered to 104 SCM professionals from the USA in June, 2019, and the resulting data was analysed via regression analysis. The remainder of this section explains the development of the survey, the data collection process, and the hypothesis testing.

4.1 Survey instrument

The survey went through a process of instrument development and pilot testing prior to administering the survey to the targeted sample. All of the questions were developed for

this study based on the literature review, and were primarily adapted from previous scales. All of the items were assessed using seven-point likert scales.

The OT/NT questions included the statements “I am frequently required to work overtime” and “I am required to work non-traditional hours” (Ko and Choi, 2019; Chung and Van Der Horst, 2018). Pay satisfaction included “I am satisfied with my current salary”, and because employees typically compare their level of pay both internally and externally (Long et al., 2011), a second question was asked: “My employer pays well compared to other companies in my region”. Transformational leadership was based on a scale from Love and Singh (2011). Burnout was based on a subset of items from the Maslach (1982) burnout inventory. The remote work deficit scale was developed for this study based on the literature review.

The survey instrument was pilot tested for face validity and clarity with eight supply chain managers and senior SCM students. Based on the pilot test, ambiguous items were reworded, and redundancies were removed (Appendix A).

4.2 *Data collection*

The questionnaire was distributed via e-mail to a panel of employees working in professional level SCM positions. Out of 694 individuals who opened the survey link, 104 usable questionnaire results were recorded, yielding an effective response rate of 14.99%. The respondents had an average age of 41.75 and an average tenure of 9.20 years with their current employer.

Of the respondents, 36.5% were first level professional employees, 47.1% were low or mid-level managers, and 16.3% were senior managers or executives. The job types were limited to ‘professional’ level jobs rather than ‘labour’ type jobs such as warehouse worker or truck driver, although supervisors of these types of jobs were included in the sample. With respect to education, 72.1% had completed a four-year college degree, 25.0% held a master’s degree, and 2.9% had earned a PhD. The respondents’ employers were varied by number of employees with 5.8% of firms having fewer than 20 employees, 18.3% with 20 to 99 employees, 27.9% with 100 to 999 employees, and 48.1% with 1,000 or more employees.

4.3 *Data analysis*

All questionnaire items received the full range of responses (1 to 7). The means ranged from 3.38 to 5.45, and the standard deviations ranged from 1,513 to 2,145. All of the skewness and kurtosis values were found to be acceptable, indicating that the data was normally distributed.

Several steps were taken to minimise bias in the survey, including following Dillman’s et al. (2009) total design method when designing the survey. The first and last 20 responses received were compared to each other to test for non-response bias under the assumption that late respondents are somewhat representative of non-respondents (Lambert and Harrington, 1990). An independent samples t-test showed no significant differences between the two groups. Data was collected over a short period of time, roughly one month, to avoid historical bias (DeVellis, 2003). The age and organisation level of the respondents were used as control variables.

To confirm the validity and reliability of the measurement model, several statistics were tested. All of the items loaded onto the appropriate factors. All Cronbach’s alpha

values were above 0.7. In an exploratory factor analysis, all items loaded onto the expected factors with no instances of cross-loading higher than 0.350, indicating that these biases are of minimal concern (Appendix B).

5 Results

The hypotheses were tested using a moderated regression model. The results of the hypothesis testing process are presented in Table 1.

Table 1 Regression results

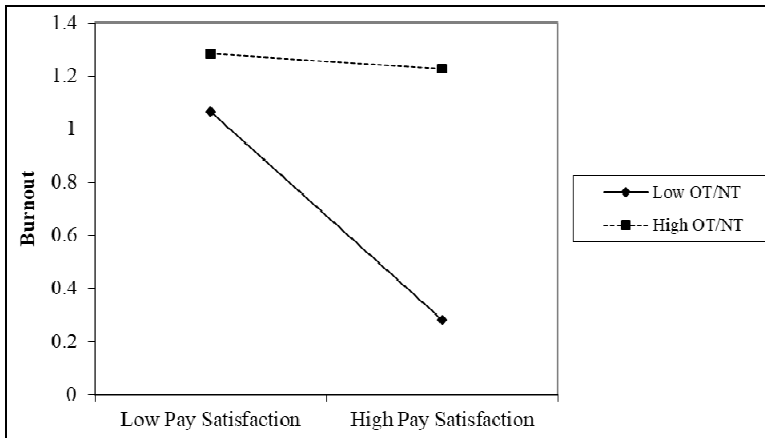
Adjusted R ²	0.428	
<i>Item</i>	<i>Coeff.</i>	<i>St. err.</i>
Constant	0.965	0.342
Direct		
Remote work deficit	0.220**	0.081
OT/NT	0.290***	0.078
Pay satisfaction	-0.209*	0.091
Transformational leadership	-0.332***	0.087
Interaction		
Pay sat. × remote work deficit	0.044	0.072
Pay sat. × OT/NT	0.182*	0.074
Control		
Age	-0.021**	0.007
Organisation level	-0.052	0.112

Note: n = 104, *p < .05, **p < .01 and ***p < .001.

The regression analysis indicated that all of the predicted antecedent variables were significantly related to burnout and in the hypothesised directions, with an adjusted R² value of 0.428 for the model Table 1. The first two hypotheses covered constructs that were expected to increase burnout due to a reduction in P-E fit. OT/NT and remote work deficit were both found to be positively related to burnout ($\beta = 0.284$ and 0.216 , respectively), thus supporting Hypotheses 1 and 2. The next two hypotheses related to constructs that were expected to reduce burnout by increasing the level of fit between employees and their workplaces. Pay satisfaction and transformational leadership were both found to be negatively related to burnout ($\beta = -0.209$ and -0.334 , respectively), thus supporting Hypotheses 3 and 4.

Hypotheses 5a and 5b tested interaction effects. The pay satisfaction and remote work interaction was not significantly related to burnout, so Hypothesis 5a was not supported. The pay satisfaction and OT/NT interaction was significantly related to burnout, thus supporting Hypothesis 5b. As shown in Figure 2, an increase in pay satisfaction can reduce feelings of burnout, but when high levels of OT/NT were present, the effects of pay satisfaction on burnout are greatly reduced.

It should be noted that among the control variables, organisation level was not significant, but age was significant with a slightly negative effect. This result appears to indicate that older workers are less likely to experience burnout.

Figure 2 Interaction effects of OT/NT and pay satisfaction on burnout

6 Discussion

Reducing burnout appears to be a crucial component in the process of employee retention (CSCMP, 2020b), and retaining employees is an important part of talent management, particularly in SCM because the market for SCM talent is very competitive (McCrea, 2019). Overall job satisfaction in SCM is very high (ASCM, 2020), but employees continue to leave their jobs. It is, therefore, necessary to break down these complexities to gain a better understanding of how to retain SCM employees. We investigated this question from the perspective of burnout, identifying factors that both increase and decrease feelings of burnout. Maslach and Leiter (2008; 2017) work on burnout has provided tremendous insight into how employees respond to job design stimuli, and this study shows how this prior research can be applied in the context of SCM professionals, an area that is facing challenges today.

Despite conflicting research results related to the effectiveness of remote work (Bartel et al., 2012), its use has increased in recent years. Previous research has shown that individuals experience increased stress from remote work (Suh and Lee, 2017), however this study appears to indicate that employees view remote work as a net positive aspect of work. By investigating a remote work deficit rather than directly measuring the amount of remote work, this study captures the perceptions of individuals toward remote work. This study indicates that a deficit in the amount of remote work permitted causes an increase in burnout, and therefore, increasing remote work to a level that employees find satisfactory can reduce the level of turnover intention by reducing burnout. This finding is particularly relevant due to the COVID-19 pandemic, as 72% of respondents in an Iometrics survey say “they have the resources they need to be successful at home” and only 6% say they “don’t want to work from home in the future” (IOMETRICS, 2020). This study also supports Scandura and Lankau (1997), who found that flexibility leads to positive organisational outcomes. This study has extended that flexibility to remote work and burnout, and we argue that the lack of control and a sense of unfairness promote burnout among SCM professionals. Because some negative outcomes may occur due to remote work, such as a reduced sense of belonging or connection (Grawe and Ralston,

2019; Bartel et al., 2012; Fried et al., 2013; Van der Lippe and Lippenyi, 2018), managers must balance the level of remote work allowed, ensuring that it meets their employees' needs in order to minimise burnout, while avoiding these risks. There is a risk that employees will work more hours and face increased work-family conflict from remote work (Chung and Van der Horst, 2018), which could potentially increase perceptions of burnout, but this study indicates that burnout is also caused by too little remote work. Future research may seek to further elucidate this tension.

Firms are often under pressure to use resources efficiently and flexibly, and scheduling employees to work OT/NT is a tool for doing so. This flexibility comes at a cost, however, as it can cause negative physical and mental outcomes for many employees (Ko and Choi, 2019). Although working OT may be considered a positive aspect of work for some employees, particularly if it offers the ability to lead to increased pay or a promotion (Chung and Van Der Horst, 2018), this study points to OT/NT as an issue that may influence individuals to feel the effects of burnout. Several previous studies have indicated the negative effects of OT or NT (Rau and Triemer, 2004; Lallukka et al., 2008; Upson et al., 2007). This study contributes to the literature by underscoring the importance of limiting OT/NT for reducing burnout. There is a clear trade-off between the efficiency and flexibility of OT/NT and its effects on employees that must be weighed by managers in terms of burnout and the many potential downstream effects of burnout (Halbesleben and Buckley, 2004; Mansour and Tremblay, 2019).

Payment for work satisfies many psychological and material needs (Long et al., 2011; Edwards et al., 1998), so pay satisfaction can affect employees in multiple ways. As expected, this study showed that pay satisfaction has a direct effect on burnout, with employees who are more satisfied being less likely to experience burnout. This effect is moderated by the amount of OT/NT performed by the employee. When pay satisfaction is low, employees experience increased burnout regardless of the level of OT/NT. However, even when pay satisfaction is high, OT/NT can lead to burnout. Working OT/NT hours effectively negates the reduction in burnout caused by pay satisfaction. Remote work, however, does not appear to moderate the pay satisfaction-burnout relationship. Williams et al. (2006) argues that satisfaction with pay can lead to job performance or withdrawal cognitions and behaviours. We have similarly shown that satisfaction with pay can contribute to a reduction in burnout, but that pay may not be enough to overcome other negative aspects of a job, such as working too many hours. Due to the cost pressure that many managers face, paying employees more is not always an option. Moreover, despite increasing salaries for SCM employees, retention has been a challenge for many firms (McCrea, 2019).

The leadership of an organisation can also have an influence on burnout and turnover intention. Leadership that is viewed as transformational can help to reduce burnout among employees. Leaders can motivate employees by aligning their goals with an organisation (Yuki et al., 2002), which can reduce burnout through better alignment between the employee's needs and the working conditions offered by the employer. Transformation leadership can lead to satisfied and effective employees (Lowe et al., 1996; Bass, 1985), but we have shown that it can also work by decreasing burnout. Denis et al. (2012) previously showed that negative leader relationships can drive employees away, and this research can contribute to the understanding of that relationship by demonstrating how positive leader relationships can reduce negative consequences for employees.

Whereas a lack of leadership support can cause burnout (Houkes et al., 2001; Elci et al., 2018), we have demonstrated that transformational leadership can reduce burnout. Leadership is responsible for setting and maintaining work conditions (Waldman et al., 2015), and if they do not provide a good match between the employee and the job, then it may result in burnout for the employee.

Retaining employees is an important step in talent management, particularly in SCM because the market for SCM talent is very competitive (McCrea, 2019). As burnout is an impediment to retaining employees, it is important to identify methods to reduce burnout. We have identified several issues that increase and decrease feelings of burnout. This study has also contributed to the P-E literature by applying it to the specific field of SCM. Burnout has been studied in other contexts (Califf and Brooks 2020; Pienaar and Willemse, 2008), and this study has placed burnout in the context of SCM professionals.

6.1 Managerial implications

The effort to retain employees in the tight labour market for skilled SCM professionals appears to be hindered by burnout, and this research has identified factors that can be leveraged by managers to reduce employees' experience of burnout. Making improvements in the factors identified in this research may increase costs for an organisation. Most directly, increasing pay is likely to increase employees' satisfaction with their pay, but it obviously comes at a cost. Additionally, reducing overtime may reduce productivity, as it eliminates the possibility of utilising employees to their fullest, and hiring new workers outweighs the cost of paying overtime (Ko and Choi, 2019); but this study indicates that reducing overtime helps to reduce burnout, which can be instrumental in retaining employees.

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The amount of remote work permitted should also be carefully considered. There are financial and operational performance trade-offs involved in remote work (Hafermalz and Riemer, 2016), but the decision regarding remote work policies should also weigh employees' perspectives. In March 2020, firms were faced with the reality that remote work was essential due to the COVID-19 pandemic, as the number of Americans working remotely increased from 7% to 60%, and many companies expected remote work to continue through the year and beyond (Zojcheska, 2020). This shift created a major impact on technology platforms designed to facilitate connections between employees and keep employees engaged, productive, and motivated. Overall, employees have responded enthusiastically to this drastic shift in remote work with 77 % of employees interested in continuing to work remotely and also expressing satisfaction with working from home (IOMETRICS, 2020). Many firms increased their use of remote work prior to the COVID-19 pandemic, and accelerated it due to the pandemic (CSCMP, 2020a). This study provides support for that decision, indicating that if firms do not meet their

employees' perceptions of what is enough remote work, then they risk their employees experiencing burnout.

Rather than taking a static view of the amount of remote work, it should be compared to the level of remote work desired by employees to determine if there is a perceived deficit, which can lead to dissatisfaction and turnover. The perception of the amount of remote work allowed was fairly low in the survey, indicating that there is room to increase the amount of remote work and thus improve employees' perceptions. The desired amount of remote work is a moving target, however. The phrase 'new normal' has been used to describe life in the COVID-19 pandemic, during which remote work has become common (Melin and Egkolfopoulou, 2021). Following the pandemic, the amount of remote work allowed will most likely remain high as long as employers continue to see profitability and productivity (Farrer, 2020).

7 Limitations and conclusions

This research has shown that careful attention to job design can shape whether SCM professionals experience burnout. However, we must acknowledge some limitations in the research. Beyond the factors identified in this research, there are likely to be other personal and job related issues at play in determining an individual's fit with an organisation, such as personality type, relationships with management, and human resources policies besides pay. These additional factors represent an opportunity for future SCM researchers. The study is limited in its generalisability because the survey was limited to SCM professionals, so future studies can apply these hypotheses to general populations of workers or to other specific fields.

As a key element required to enable supply chain strategy (Stank et al., 2011), human resources should be elevated as a topic of interest to supply chain researchers. Maintaining a base of employees with skills matched to those demanded by the organisation is an ongoing challenge (CSCMP, 2020a). Retaining employees is an important step, but it is necessary to build upon this research to investigate how firms can retain and train employees to have the right mindset to support foundational SCM characteristics such as trust and relationship building (McCarter and Northcraft, 2007; Lengnick-Hall et al., 2013) and to continue to address how various talent-related issues can improve SCM performance and reduce barriers to success through SCM (Alfalla-Luque et al., 2015).

It has been noted that burnout is context specific (Jayaratne and Chess, 1984), so this study has shed light on burnout specific to SCM professionals. Burnout has recently been cited as a cause of employee turnover (CSCMP, 2020b), so by providing a better understanding of the sources of burnout in the context of SCM professionals, we have laid groundwork for further investigation into employee retention in SCM.

The continued success of companies' supply chains requires the right talent (Stank et al., 2011; McCarter and Northcraft, 2007; Lengnick-Hall et al., 2013), so, supply chain managers must consider the complexities identified in this research to continue to offer jobs that are well-designed for the current workforce in order to effectively manage SCM talent.

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Appendix A

Constructs and reliability metrics

<i>Constructs and items</i>	<i>M</i>	<i>SL</i>	<i>SE</i>	<i>a</i>	<i>ρ_c</i>
Remote work deficit				0.880	0.926
To what extent do you agree with the following statements regarding remote work (i.e., working from home)					
It is possible for employees of this company to be equally or more effective working remotely compared to working from the company's office	4.615	0.706	0.265		
I am/would be able to work equally or more effectively working remotely compared to working from the company's office	4.558	0.670	0.304		
My employer should allow more remote working than they currently do	4.615	0.718	0.379		
Overtime and non-traditional hours				0.751	0.889
To what extent do you agree with the following statements about your current job?					
I am frequently required to work overtime	3.385	0.928	0.035		
I am required to work non-traditional hours (outside of 8 AM to 5 PM, Monday to Friday)	3.462	0.842	0.078		
Pay satisfaction				0.786	0.904
To what extent do you agree with the following statements regarding your employer's compensation, benefits and workspace?					
I am satisfied with my current salary	4.510	0.902	0.041		
My employer pays well compared to other companies in my region	4.683	0.909	0.032		
Transformational leadership				0.948	0.962
To what extent do you agree with the following statements regarding your employer's senior leadership?					
The leadership team creates, fosters and supports a positive culture	4.750	0.910	0.027		

The leadership team is visible, committed and transparent to their employees	4.760	0.947	0.014
The leadership team promotes core values such as honesty, integrity, respect, collaboration and trust	5.115	0.913	0.026
The leadership team ensures that core values connect employees by common values and purpose	4.952	0.939	0.017
Burnout		0.929	0.950
To what extent do you agree with the following statements about your current job?			
I feel emotionally drained from my job	3.788	0.922	0.021
I feel burned out from my job	3.654	0.934	0.021
I feel frustrated by my job	3.644	0.928	0.014
I feel I am working too hard on my job	3.481	0.843	0.036

Appendix B

Exploratory factor analysis

	<i>REM</i>	<i>OT</i>	<i>PAY</i>	<i>LEAD</i>	<i>BURN</i>
REM1	0.899	-0.056	0.195	0.121	0.042
REM2	0.911	0.095	0.078	0.100	-0.083
REM3	0.833	-0.138	0.089	0.014	0.200
OT1	0.141	0.874	-0.125	-0.082	0.212
OT2	-0.250	0.855	0.086	-0.077	0.172
PAY1	0.213	-0.041	0.796	0.296	-0.187
PAY2	0.168	-0.004	0.839	0.233	-0.190
LEAD1	0.059	-0.038	0.197	0.916	-0.081
LEAD2	0.015	-0.107	0.156	0.912	-0.193
LEAD3	0.127	0.004	0.179	0.878	-0.184
LEAD4	0.116	-0.106	0.113	0.839	-0.363
BURN1	0.011	0.115	-0.040	-0.145	0.926
BURN2	0.075	0.113	-0.040	-0.245	0.901
BURN3	0.049	0.067	-0.292	-0.394	0.803
BURN4	0.053	0.239	-0.225	-0.093	0.788