Supervisors’ engagement in safety leadership: Factors that help and hinder

Stacey M. Conchie a,⇑,1, Susannah Moon a,1, Malcolm Duncan b

a Institute of Psychology, Health and Society, University of Liverpool, Liverpool L69 7ZA, United Kingdom
b Laing O’Rourke, Manchester M15, United Kingdom

A R T I C L E   I N F O

Article history:
Received 22 October 2011
Received in revised form 28 March 2012
Accepted 20 May 2012
Available online 21 July 2012

Keywords:
Construction
Demands
Resources
Safety leadership
Support

A B S T R A C T

A growing body of research supports the importance of supervisors’ safety leadership in promoting employees’ engagement in safety. However, the factors that give rise to these safety leadership behaviors are under-explored. The current study addressed this void by adopting a Job Demands-Resources framework to identify contextual influences on supervisors’ safety leadership behaviors. Focus group data from sixty-nine supervisors recruited from the UK construction industry showed that role overload, production demands, formal procedures, and workforce characteristics hindered supervisors’ engagement in safety leadership. In contrast, social support (especially from the organization and co-workers) and perceived autonomy promoted supervisors’ engagement in safety leadership. Exploration around these issues highlighted a need for more training for supervisors in this role and the development of a supportive environment between supervisors affiliated with different parent companies.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

The construction industry records the most accidents, injuries and fatalities of all sectors at a European and International level (European Agency for Health & Safety at Work, 2007; Health and Safety Executive, 2009; National Institute for Occupational Safety and Health, 2010). To address this issue, academics and practitioners have turned to safety leadership as one way to improve employees’ safety behaviors and thereby reduce accident and injury rates. This focus is consistent with research that shows initiatives directed at supervisors may be more effective at improving safety than initiatives directed at employees (Zohar and Luria, 2004), and findings that supervisors within the construction industry have a stronger influence than co-workers on employees’ safety attitudes (Dingsdag et al., 2008). It is also supported by studies that show a positive association between supervisors’ safety leadership behaviors, such as safety coaching, sharing safety values and safety communication, and employees’ safety behaviors (Barling et al., 2002; Conchie and Donald, 2009; Conchie et al., 2012; Kelloway et al., 2006; Mullen and Kelloway, 2009; Törner and Pousette, 2009).

Despite the growing interest in safety leadership, relatively little attention has been given to the factors that influence supervisors’ engagement in this role. Briefly defined, ‘engagement’ is the extent to which supervisors show energy, enthusiasm, feel a sense of inspiration, and are fully concentrated (Schaufeli and Bakker, 2004) in their role as a supervisor and more specifically, as a safety leader. Research in non-safety domains has shown that individual factors such as personality and emotional intelligence are important antecedents of engagement in leadership (Barling et al., 2000; Bono and Judge, 2004; Hofmann and Jones, 2005). In contrast, relatively little research has focused on contextual factors that exist within the environment to increase (or decrease) these behaviors ( Bommer et al., 2004; Porter and McLaughlin, 2006). Contextual factors are no less important, and research suggests that these may account for between 41% and 70% of the variance in leadership behaviors (Arvey et al., 2006; Johnson et al., 1998). Thus, contextual factors are the focus of this study.

In the following sections we summarize the contextual factors that likely impact supervisors’ engagement in safety leadership within the construction industry. We do this in the framework of the Job Demands-Resources (JD-R) Model (Demorouti et al., 2001), which proposes that contextual factors may be considered as demands that deplete a supervisor’s energy and consequently engagement in safety leadership, or as resources that facilitate a supervisor’s engagement. We use the term ‘safety leadership’ throughout our discussion to capture actions that have a positive impact on employees’ safety behaviors (such as transformational leadership; Barling et al., 2002), rather than styles that reduce employees’ safety behaviors (such as passive or avoidant leadership; Kelloway et al., 2006; Luria, 2008).

In focusing on the factors that promote safety leadership, the study makes two important contributions. First, it addresses observations that scant research exists on the contextual antecedents of
leadership (e.g., Porter and McLaughlin, 2006) by identifying factors within the environment that shape leadership behaviors. In doing this, the study contributes to the growing knowledge of factors that promote engagement at work, which has gained increasing attention in non-safety domains (e.g., Crawford et al., 2010; Macey et al., 2009). Second, in identifying the factors that impact supervisors’ engagement in safety leadership, the study shows areas that may be targeted, or controlled, during intervention efforts to promote safety. More simply it identifies contextual factors that may operate against intervention efforts if they are not controlled, or which may help intervention efforts if they are promoted.

1.1. Contextual influences on safety leadership

Contextual influences broadly group into the two categories of demands and resources. According to the JD-R Model (Demorouit et al., 2001), demands reduce an individual’s engagement though a process of burnout (i.e., physical and emotional exhaustion), while resources increase an individual’s engagement through facilitation (i.e., increasing motivation). Although the nature of demands and resources may differ by specific context or domain, this general pattern is relatively robust. Within the domain of safety, for example, Hanze and Chmiel (2010) found that job resources positively impacted employees’ safety behaviors by promoting motivational involvement in the job, while job demands promoted routine safety violations through job strain. Similarly, Nahrgang et al. (2011) showed that employees’ safety behaviors were negatively impacted by job demands (e.g., perceived danger from risk and hazards and the associated psychological and energy demands of handling and avoiding these) through burnout, and were positively impacted by job resources (e.g., social support) through engagement.

While job demands have traditionally been viewed as having a negative impact on performance, Crawford et al. (2010) recently proposed a refinement to the model stating that demands, depending upon their interpretation by the person, may act to increase performance. They showed that demands negatively impacted engagement when they were considered as a hindrance, and positively impacted engagement when they were considered as a challenge that promoted personal growth. The potential for challenge demands to exist within the domain of safety was recognised by Nahrgang et al. (2011); however their meta-analysis did not test for this empirically. Consequently, it is unclear which demands supervisors perceive as challenges that increase their engagement in safety leadership, and what demands they consider to be a hindrance.

1.2. Job demands

Job demands refer to the physical, social, or organizational aspects of a job that require sustained mental and physical effort from a person, and which may lead to psychological, emotional or physical exhaustion. Typical job demands include excessive workloads, receiving competing demands, and situational constraints such as poor equipment or perceived risks and hazards. Within the domain of safety, situational constraints have been shown to relate positively to workplace injuries (Nahrgang et al., 2011; Snyder et al., 2008). Also, workload has been associated with reduced safety citizenship behaviors (i.e., discretionary safety behaviors, such as helping; Turner et al., 2005) and an increase in unsafe behavior (Barling et al., 2002; Choudhry and Fang, 2008; Finn et al., 2000; Frone, 1998; Hofmann and Stetzer, 1996).

Workload demands are especially problematic for safety leadership. First, they deplete supervisors’ energy, availability and time, and consequently, their safety-related interactions with employees. Research in non-safety domains shows that leaders in close proximity to employees and with regular contact are more likely to engage in positive leadership behaviors (Antonakis and Atwater, 2002), such as those considered here. Second, they encourage reliance on coping mechanisms such as acceleration (processing information at a faster rate), avoidance (of decisions, and filtration (subjectively selecting information for processing) (Miller, 1960). These mechanisms result in processing less information about a situation (Janis and Mann, 1977), and promote a focus on tasks that are necessary to complete a job, of which safety may not be regarded as one. Consequently, as workload demands increase, supervisors may be likely to show less engagement in safety leadership behaviors.

Finally, and specific to the construction industry, are demands imposed by a diverse workforce. The construction industry employs highly mobile workers with differing skill levels (Gervais, 2003), a large body of subcontractor and migrant labor (Bust et al., 2008), and differing leadership and management hierarchies (Evans, 2008; Iszatt-White, 2009). This cultural mix (both organizational and national) brings with it differences in language, safety training, and education, in addition to the need for cooperation between contractor companies (Schubert and Dijkstra, 2009). This often leads to disorganization, which partly emanates from the ambiguity of who is responsible for employees’ safety and how existing systems may be implemented within a fragmented workforce (Dwyer, 1991).

1.3. Job resources

Job resources refer to the physical, social and organizational aspects of a job that aid in the completion of tasks; reduce the negative consequences of job demands and contribute to personal growth. Two common job resources are autonomy and social support. Autonomy relates to a sense of independence while carrying out a task, and promotes engagement in an activity because it encourages ownership for the behavior, feelings of subjective competence and a sense of relatedness to another (Deci and Ryan, 1985). According to Deci and Ryan (2000), these things contribute to a person’s basic needs of personal growth and psychological well-being, and reinforce behaviors that gave rise to their fulfilment.

The benefit of autonomy for promoting safety in general has received some support. It has been related to lower injury rates (Shannon et al., 1997), a focus on human factors rather than technology factors (Grote and Künzler, 1996), and the appropriate handling of risks (Grote and Künzler, 2000). Autonomy is proposed to have the strongest influence on safety when target behaviors are not rule prescribed (and so require autonomy) and when a high level of uncertainty exits (Grote, 2007). Interestingly, effective safety leadership meets these two conditions: it is typically defined by behaviors that expand formal role obligations, and the dynamic nature of construction (as detailed in Section 1.2) makes uncertainty inherent within the system. Given these two things, autonomy might be expected to act as a resource that promotes supervisors’ engagement in safety leadership. It may do this by buffering the negative impact of job demands by affording supervisors greater control over the order, and method, by which role demands are met (Karasek, 1976, 1998; Xanthopoulou et al., 2007), or by independently energizing safety leadership behaviors.

Social support is the single most consistent resource that positively affects engagement in safety across a range of different industries (Nahrgang et al., 2011). Social support may come from the organization (Meares and Reader, 2008; Wallace et al., 2006), supervisors (Turner et al., 2010; Zohar and Luria, 2004), or co-workers (Cheyne et al., 1998). Emerging research suggests that support from co-workers is particularly important. For example, Tucker et al. (2008) found that co-worker support had a relatively
stronger influence on employees’ engagement in safety than support from supervisors. Similarly, Turner et al. (2010) showed that support from co-workers was important for ensuring employee safety was maintained when job demands increased. These findings suggest that support in general, and co-worker support in particular, will be important in promoting supervisors’ engagement in safety leadership. Providing supervisors with support not only reduces pressures from demands such as coordinating multiple contractor groups, time schedules and access to resources; it also enhances their feelings of self-efficacy to engage in leadership behaviors that expand beyond formal requirements.

1.4. Current study

The current study sought to identify the contextual factors that supervisors perceive as being a help, or hindrance, to their engagement in safety leadership. The study was carried out within the construction industry, which routinely reports the highest safety incident rates, and which has been the target of recent and ongoing interventions to improve safety (e.g., Kines et al., 2010; Lahtinen and Pälvärinta, 2010). We adopted a semi-structured qualitative approach within the study to allow for a sensitive exploration of context, and a detailed focus on local patterns within construction (Bryman et al., 1996). Consistent with our semi-structured approach, we did not set specific hypotheses, but expected job hindrance demands to be regarded as things that reduce supervisors’ engagement in safety leadership and job resources to be perceived as positive influences. While these demands and resources were not determined prior to the study, we expected some of those reviewed in Sections 1.2 and 1.3 to emerge as important.

2. Methods

2.1. Methodological approach and participants

Focus groups were used to explore the contextual factors that supervisors perceive as being a help or hindrance to their engagement in safety leadership behaviors. As a method, focus groups provide a naturalistic and detailed snapshot of an issue by allowing participants, in this case supervisors, to clarify issues within a group setting. For maximum benefit, each focus group comprised supervisors from different trades, employing companies, and levels of experience. Using diverse groups such as this allowed for the identification and exploration of the conditions under which a contextual factor had a strong influence on supervisors’ engagement, and conditions under which this influence was minimal.

Participants were sixty-nine supervisors recruited from ten construction projects throughout the North of England. Eight of the projects were ‘new build’ and two projects were refurbishment of existing buildings where the premises were still partially occupied. The safety manager on each of the project sites circulated a short summary of the study to all supervisors asking for volunteers to take part in the focus groups. The summary was produced by the research team and outlined the aim of the study, its background, the requirements from supervisors who volunteered to take part, and the anonymity and confidentiality of responses. It also stated that the study sought to recruit supervisors who were directly responsible for, or the immediate level above, first-line employees (i.e., operatives). This information was reiterated to supervisors at the start of each focus group and their informed consent was obtained.

The sample comprised 68 male and one female supervisor, which is characteristic of the construction industry. Collectively, the supervisors represented eight contractor companies, and had an average tenure in the role of supervisor of 9 years (range = 9 - 40 years). Supervisors’ responsibilities included overseeing employees’ task performance, ensuring safety policies were adhered to, and when necessary, disciplining employees for unsafe behavior.

2.2. Focus group procedure

Each focus group comprised between 6 and 10 supervisors and took place in a private conference room on site. All participants were given an information sheet at the start of the focus group outlining the topic for discussion and their right to withdraw at any time. All supervisors agreed to participate and gave their permission for the discussion to be digitally recorded and later transcribed verbatim (omitting any information that would allow an individual, or their company, to be identified). Each focus group was designed to be as open as possible, beginning with the broad question of “in your opinion, what defines good safety leadership?” followed by “what factors help supervisors to engage in good safety leadership?” and “what factors make it difficult for (i.e., hinder) supervisors to engage in good safety leadership?” These questions were shown in two pilot focus groups, which were carried out with 15 supervisors (n = 7 and 8) on two different project sites, to be effective in stimulating discussion while avoiding subjectivity from the group facilitator.

To encourage conversation during the focus groups, and to provide a point of reference for all group participants, each supervisor was asked to provide one factor that helped and one factor that hindered engagement in safety leadership. Supervisors were informed that these factors did not have to be restricted to the current project, or the current project’s main operating company, but could include any of those things experienced during their time as a supervisor. The factors that were identified by each supervisor was discussed at a group level, in which each factor was probed in detail to establish if it was perceived by supervisors as being among the most important influences on safety leadership behaviors. Each focus group lasted between 40 and 90 min.

2.3. Data analysis

Transcripts were analyzed in accordance with Thematic Analysis (TA) as outlined by Braun and Clarke (2006). This method has the advantage of being flexible and unconstrained by a pre-existing theoretical framework, as with other qualitative methods. An inductive approach was deemed inappropriate for the current study, as the aim was not to generate theory, but to understand the factors that impact supervisors’ engagement in safety leadership. The TA method used for the purpose of this research sits between the essentialist or realist method, reporting the experiences, realities and meanings of the participants, and the ‘contextualist’ method, which takes into account the ways that individuals make meaning of their experience and the ways the broader context influences these meanings. This is particularly important for this study, and its focus on the way that context may interact with, and influence, behavior.

Transcripts were initially coded by sentence and then analyzed for broader themes, patterns and meaning to aid generation of the final themes. As per Braun and Clarke (2006), a theme was constructed from repeated patterns of meaning throughout the data, focusing on those elements most frequently mentioned by participants and those mentioned with some degree of intensity. Recurring themes were identified by ‘combing’ through the data and relating this to established literature, aiming to build a strong
picture of safety leadership that is embedded within the context and which is, or is not, complimented by current leadership theory.

3. Results

3.1. ‘Good’ safety leadership within construction

Each focus group began by asking supervisors what they considered to be ‘good’ safety leadership. A general consensus emerged across the groups, with most supervisors highlighting characteristics reflective of transformational, charismatic or participative styles of leadership. For example, supervisors emphasized the importance of coaching, being available, and being approachable. ‘Talking’ was considered the best method of relationship building, and supervisors believed that it was important for employees to feel that they could consult them on any issue, especially those regarding safety. Consistent with other research carried out within the construction industry (e.g., Törner and Pousette, 2009), supervisors emphasized the importance of developing mutual trust with employees, and cited respect and communication as two ways to achieve this. Illustrative quotations of these points are:

“If the guys working for you think that they can’t talk to you, or if they talk to you about a problem that it isn’t going to get dealt with, they’re not going to talk to you and that’s when you’re going to have an accident because things tend to get left.”

“It’s basically just speaking to them, you say ‘look, if you’re not sure about anything, come ask, and go ask whoever you are working with – senior lads. And just one of the main things, if you don’t think it’s safe, don’t do it, come and ask us.”

“You’ve got to trust the guys that you’ve got and I think if you can get a core of work, your own work guys, eventually, they obviously trust you and you can trust them.”

3.2. Hindrance demands: role overload, production pressure, workforce characteristics

3.2.1. Role overload

A recurring theme throughout the focus groups was the negative impact that multiple, and often conflicting, role responsibilities have on supervisors’ efforts to engage in safety leadership. Supervisors reported a number of responsibilities associated with their role, which were effectively summarized by one supervisor:

“...you’re the supervisor, you’re the nursemaid, you’re the babysitter, you’re the trainer, you’re the guy that makes sure they’re doing the job right. So you’re the specifier, virtually, you order the materials, you’ve got to make sure they’re working with the right gear, you’re the safety guy, you’re the manager, you’re the project manager...”

Multiple role responsibilities were perceived to hinder safety leadership because they dilute the perceived importance and salience of safety, increase cognitive load, and at a more basic level, reduce the amount of time that supervisors focus on safety. While it is true that safety is intertwined with all aspects of work activity, the supervisors interviewed generally regarded safety as a distinct component that sits alongside production rather than being embedded within it. While this is likely to reflect the nature of the safety culture that supervisors operated within (rather than being a general state within industry), it resulted in supervisors regarding safety as a distinct aspect of their job that is fulfilled when other responsibilities are few or less demanding:

“You get to a point there where you have probably got ten hats and you only do the job 10% as well as you should be doing it because you have got that much to do.”

“Double the men, double the paperwork, double the health and safety, you need two people. They never double the supervisors do they? It’s always one supervisor for how many men are there [sic].”

Of the different responsibilities that supervisors reported for their role, formal procedures around administration and discipline were regarded as strong hindrances on their engagement in safety leadership. Supervisors uniformly identified administration, specifically paperwork, as a hindrance because it takes them away from the workface and reduces the length of time that they spend on site with employees. Consistent with other studies (e.g., O’Dea and Flin, 2001), supervisors believed that spending time with employees helped them to prevent accidents, identify employees with training needs and offer coaching: behaviors indicative of good safety leadership. Spending time with employees is particularly important on projects focused on refurbishment of partially occupied building, or when working within the public realm, as the risk profile is very different from a static fully controlled site environment.

“I think there’s perhaps too much time spent on the paperwork side of safety and not enough time walking around site looking at what’s going on ‘cos [sic] if you’re out there more, they won’t do such silly things.”

“It stops you going around and seeing what’s happening on site. And if you’re on site, then you can stop something going wrong.”

A second procedure raised in several focus groups related to discipline. Supervisors discussed the conflict between formal discipline procedures, which centered on issuing ‘cards’ for non-compliance with safety, and their preferred style of safety leadership that focused on coaching and communication. Some supervisors believed that issuing cards to employees created ill feelings among employees and between employees and supervisors, demotivated staff, and generated a tension with their preferred style of leading. Typical quotes that emerged during these discussions were:

“...if your lads are working under you, you should be able to speak to them, otherwise you shouldn’t be a supervisor and it’s as simple as that. You shouldn’t need to issue them with cards.”

“I think the most important thing we’re missing here is, with all these rules and regulations, we’ve got to motivate these blokes ... and you’re getting all these rules and regulations, and rebelling against them, and it’s just like, making life harder for us because at the end of the day, we’ve still got to be there, talk to them, motivate them and get the job done.”

“If you shout at them saying ‘you’ve done wrong, there’s your card, go for induction’ then, you know, they don’t understand what they’ve done wrong. It’s about education.”

3.2.2. Production pressure

Intensifying the negative effects of role responsibilities is pressure to complete jobs to tight deadlines within an ever-changing context of team members and risk. The problem of time pressure for safety is not a new discovery, and is intensified within the construction industry due to planning inadequacies or misjudgements, the suspension of work due to bad weather, and errors in delivery dates and times; all of which cause delays. These delays hinder supervisors’ engagement in safety leadership as supervisors continue to work to the same completion date, which prompts a focus on ‘getting the job done’ with less respect for safety. As commented
by one supervisor, “If you get behind them jobs, pressure increases and safety does get lax because everybody is pushing and your emphasis on safety is not the same…” The extra work required to compensate for lost time hinders supervisors’ engagement in safety leadership as it narrows their focus on completing the job, which tends to manifest in laboring alongside employees (“It’s all hands on”). According to some of the supervisors within the focus groups, during times of high pressure they have less opportunity to ‘watch’ employees and coach them on completing jobs safely. The focus during these times is production.

3.2.3. Workforce characteristics

Workforce characteristics, specifically subcontractor safety attitudes, inadequately skilled employees, and language barriers, emerged as another hindrance demand. Supervisors believed that their efforts to engage in safety leadership are hindered by subcontractor attitudes that manifest as resistance to safety. In such cases, supervisors reported feelings of frustration and a tendency to adopt a more directive, than consultative, leadership approach. Similar frustrations were reported when employees were inadequately skilled for the job:

“Er unfortunately it’s price work, so if they [subcontractors] don’t do the work, they don’t get paid, so they’re always in a rush, it’s like because they’re rushing, because they’re not thinking, they’re not calm, accidents happen, it’s got to be controlled. It’s harder for us to supervise, it’s harder for us to say ‘whoa’, you know?”

“I feel frustrated if I know for a fact that I’ve got somebody in a position that somebody else in that position [sic], and I’ve got to supervise them and I know they’re no good in that position. Then I get frustrated because I’m fighting a losing battle.”

Challenges to supervisors’ engagement in safety leadership also come from migrant labor and language barriers. Supervisors with experience of working with migrant labor discussed their uncertainty regarding whether or not employees understood their guidance regarding safety. This prompted a tendency among supervisors to reduce their engagement in safety coaching and training in favor of a simpler directive approach. This change in leadership style was reported irrespective of whether or not a ‘translator’ was present on site (typically a member of the workgroup who can translate English), as supervisors were unable to tell how much of their original instruction had been effectively communicated.

“But I mean trying to communicate what you want them to do, how you want them to do it, how you want them to go about it safely as well and getting them to understand it. You know, sometimes you can explain it to them and they might nod and agree, but it’s, it’s that, it’s that question whether they have understood it or are they just nodding.”

“On my gang I’ve got quite a few foreign labor and that’s quite an issue, there’s a language barrier. There’s nothing wrong with the labour, it’s just the communication.”

The tendency of supervisors to adopt a directive approach of telling rather than consulting presented as a coping mechanism that fulfills supervisors’ responsibility for safety, but also preserves their energy. For example, if the time spent coaching employees on safety resulted in no obvious gains—above and beyond those acquired with a more directive approach—then supervisors invested less energy in these actions (from a mere survival perspective it would be difficult to self-rationalize investing energy in behaviors with no obvious additional gains). Instead, this energy was invested in other demands, or for situations in which benefits might be observed with extra effort. The ability of supervisors to adopt their leadership approach to the situation or employee is known (e.g., Dansereau et al., 1975; Graen and Cashman, 1975), and is suggested by these results to serve as a possible coping mechanism when faced with multiple role demands.

3.3. Challenge demands

Although supervisors discussed the problems of subcontractor employees for safety leadership, not all supervisors shared this view. Some supervisors regarded their work with subcontractors as a challenge, and reported sustained efforts to engage in safety leadership:

“But I think you tend to find you’ve got to look after sub-contractors probably a bit more than we should do. On site we’re responsible for them for the work has to be carried out, but their supervisor should still come to site and go through the work with them.”

“People with bad attitudes, you feel like you’re wasting time talking to them, but you’ve still to keep going back and telling them. You know it’s a complete waste of time, you still got to do it.”

“Because it’s the mentality of ‘I’ve heard it all before.’ But you take the time and sit and listen, [and say to employees that] it might just save your life.”

“But I think there’s… sometimes you go out on site, it’s like having a classroom full of children and you’re the teachers. And you’ve got to treat each one individually.”

The difference in perceptions regarding subcontractors appeared to be related to a supervisor’s level of self-esteem, locus of control and felt responsibility. For example, supervisors who presented high self-esteem (confidence in their own ability to shape another’s safety), expressed a felt responsibility for safety, and adopted an internal locus of control for safety reported more examples during the focus groups of their engagement in safety leadership with all employees. Although tentative, these links suggest that the way in which supervisors’ interpret and respond to a situation may be a function of these individual factors.

3.4. Helpful resources: social support and autonomy

Two main resources that emerged across the focus groups were social support and autonomy. Consistent with Nahrgang et al.’s (2011) meta-analysis, and Törner and Pousette’s (2009) interview findings from construction, supervisors discussed social support as an important moderator of role demands. Support from the organization was discussed in relation to a behavioral change programme that is used by some companies within the construction industry to raise awareness of personal responsibility for safety and ultimately promote a positive safety culture. From the perspective of the supervisors included in the focus groups, the programme supported their engagement in safety leadership for three main reasons.

First, it conveyed a message that safety is a top priority of the organization and is something that is expected from supervisors as part of their role. Second, the programme equipped supervisors with the necessary skills and knowledge to lead on safety, and provided them with the tools on how to approach employees with safety issues. For some supervisors, a lack of experience and formal training in how to be a supervisor was regarded as something that reduced their engagement in safety leadership. The programme addressed this by providing supervisors with both the knowledge and confidence to lead employees:
Third, supervisors believed that the programme increased employees' (i.e., operatives) safety awareness, positive safety attitudes, and consequently their receptivity to supervisors' safety leadership behaviors. As mentioned by one supervisor: “When it came out 5 years ago you’d thought ‘oh god, what’s this now?’ … it does make people think … and it takes time but it’s becoming more and more, like within people now. It’s culture change isn’t it?” Such observations suggest that organizational support—through the implementation of safety programmes—has both a direct impact on supervisors’ safety leadership by equipping them with tools and skills, but also has an indirect impact by increasing employees’ receptivity to safety and creating the foundation of a positive safety culture in which safety is held as an important value.

Similar to organizational support, supervisors recognized the importance of support from managers and co-workers (i.e., other supervisors). All supervisors agreed that having a supportive manager was crucial in their efforts to engage in good safety leadership as it enhanced confidence that their actions would be “backed-up.” However, disagreement emerged in relation to the extent to which supervisors felt supported at this level. Analysis of the data suggested that these differences were related to project size, the project phase, and the experience of the supervisor. More specifically, supervisors believed that managers were more supportive on smaller projects, at the start of projects, and with supervisors who have less experience. Most supervisors agreed that managers could give more support, and that this may be as simple as offering verbal recognition for safety. While supervisors agreed that verbal recognition did not initiate their engagement in safety, they believed that it contributed to its maintenance:

Supervisor A: “It wouldn’t hurt for the higher management to acknowledge the fact that we’re working safe though would it?”

Supervisor B: “Yeah, just a pat on the back.”

Supervisor C: “A pat on the back.”

Supervisor D: “You know, you guys are working safely, well done. Well done. Something like that.”

More important than manager support, and consistent with emerging findings (e.g., Tucker et al., 2008; Turner et al., 2010), is support from other supervisors. Across all of the focus groups, supervisors identified co-worker support as a resource that helps supervisors feel able to alter the situation. If true, this suggests that the interpretation of demands as a hindrance or a challenge may depend, in part, on the extent to which supervisors feel able to contribute to method statements, pace of work and materials used, while others discussed this in relation to the contextual factors that impact supervisors’ engagement in safety leadership, which were presented as both a hindrance demand and a challenge demand. Workforce characteristics, which reflected inadequate skill for a task or poor English (i.e., non-native English speakers) were regarded as demands, whereas characteristics indicative of a negative or biased attitude towards safety were regarded as a challenge. One apparent difference between these two groups is that the former is arguably beyond a supervisor’s capacity to change, while the latter is within their capacity to change. If true, this suggests that the interpretation of demands as a hindrance or a challenge may depend, in part, on the extent to which supervisors feel able to alter the situation.

Supervisors discussed the importance of leadership behaviors associated with coaching, consultation, respect, and believing in the effectiveness of the safety systems so that communication with employees regarding these systems is genuine. Of particular interest was the finding that these behaviors may be thwarted, not only by role demands and production pressure, but also by formal procedures concerning discipline. Discussions around discipline presented a picture similar to Chitayat and Venezia’s (1984)

4. Discussion

This study sought to address a gap within the safety literature relating to the contextual factors that impact supervisors’ engagement in safety leadership. We did this within the framework of the JD-R Model, which has been used to explain general work performance, and more recently, safety performance (Hansez and Chmiel, 2010; Nahrgang et al., 2011). Consistent with this model, and providing initial support to its use in understanding leadership engagement, we found that contextual factors relating to role overload and production pressures hindered supervisors’ engagement in safety leadership, while social support and autonomy promoted supervisors’ engagement. Mixed results emerged for the effects of workforce characteristics, which were presented as both a hindrance demand and a challenge demand. Workforce characteristics that reflected inadequate skill for a task or poor English (i.e., non-native English speakers) were regarded as demands, whereas characteristics indicative of a negative or biased attitude towards safety were regarded as a challenge. One apparent difference between these two groups is that the former is arguably beyond a supervisor’s capacity to change, while the latter is within their capacity to change. If true, this suggests that the interpretation of demands as a hindrance or a challenge may depend, in part, on the extent to which supervisors feel able to alter the situation.

Supervisors discussed the importance of leadership behaviors associated with coaching, consultation, respect, and believing in the effectiveness of the safety systems so that communication with employees regarding these systems is genuine. Of particular interest was the finding that these behaviors may be thwarted, not only by role demands and production pressure, but also by formal procedures concerning discipline. Discussions around discipline presented a picture similar to Chitayat and Venezia’s (1984)
proposal that leadership reflects a “lack of power” caused by rules and procedures, and the norms of an organization’s climate. For example, the supervisors in this study discussed discipline procedures according to their “power to” act in certain ways (or lack thereof), rather than their “power over” employees. This finding stresses the need for organizations to consult with supervisors about the effectiveness of procedures, and seek suggestions for improvement. In doing this, organizations may increase supervisors’ feelings of autonomy in their role, which was found in this study to be important for promoting safety leadership.

Comments from supervisors suggested that autonomy in the way that employees are lead on safety is more important than autonomy in how tasks are carried out or the order in which jobs are completed. Allowing supervisors this freedom does not imply a situation in which discipline is absent, as many supervisors recognized the benefits of discipline especially when an employee is ‘acting like a complete lunatic.’ However, it does involve them in the decision-making process, increases their ownership for safety and ultimately promotes effective safety leadership.

Although the current study adopted a JD-R model to explain the emergence of safety leadership, the results may also relate to models such as the Human Factors Analysis and Classification System (HFACS; Shappell and Wiegmann, 2000) or ABC models of human behavior. For example, HFACS proposes that unsafe acts (which may be considered as poor, or absent safety leadership here) can be traced to three levels of failure: immediate preconditions for unsafe acts (environmental, conditions of operators, and personnel factors), unsafe supervisors, and organizational influences. In the context of the current study, unsafe conditions may include role overload (which may promote burnout) and inadequate resources, unsafe supervision may include a lack of support or examples of poor leadership from managers, and organizational influences may include a poor safety culture or the selection of employees who are ill skilled for tasks. As suggested by HFACS, and discussed earlier, the outcome of these failures is likely to be a reduction in safety leadership. Presented in this way, it might be possible to determine the extent to which supervisors are likely to engage in safety leadership from factors that exist within the local and more distal (organizational) environment. Similarly, the extent to which safety leadership is likely will be indicated by the state of the organization’s safety culture, which when positive (e.g., management support for safety, employee involvement in safety) will be related to greater engagement from supervisors.

4.1. Practical implications

The findings have important practical implications. First, our results suggest that demands may have a positive impact on leadership if they are regarded as a challenge by supervisors. These perceptions appear to develop when supervisors’ believe that they have the capacity to address, or change, a situation. Possible ways that organizations may develop these perceptions is through supportive environments, or by providing training that equips supervisors with the necessary interpersonal skills in how to approach employees about safety. Training might also be used to address hindrance demands such as paperwork (by providing training in how to complete paperwork more efficiently), and habitual behaviors that demote safety. For example, training in a supervisory role will help prevent supervisors, particularly those promoted to the role through good performance in their trade, from reverting to previous role-behaviors when time pressures are high and associated stress increases. In most cases, these previous behaviors are production-focused, and when adopted by supervisors, lead them to labor alongside employees rather than supervise them on safety.

Second, and in agreement with a number of previous studies (e.g., Christian et al., 2009; Mearns and Reader, 2008; Tucker et al., 2008; Turner et al., 2010), our findings stress the need to develop a supportive environment. Of particular importance is support from co-workers, namely other supervisors. Support at this level offers practical benefits of facilitating the coordination of tasks and work teams, and emotional benefits of boosting self-esteem. This type of support exists between supervisors from the same company, and lesser so, between supervisors from different companies. One way to address this may be through supervisor forums, in which issues related to safety may be raised and best practices shared. It may also be possible to foster co-worker support by engendering greater communication and cooperation between trade contractors at the organizational level. For example, stronger partnerships between companies and a shared appreciation of the importance of safety may cascade to supervisor relationships and manifest as increased support at this level.

4.2. Limitations

While this study has identified important influences on safety leadership, it is not without its limitations. First, the study focused on contextual factors that impact supervisors’ engagement in safety leadership and as such, said little about individual factors. Research in non-safety domains has shown that leadership behaviors may be influenced by an individual’s personality, self-efficacy and emotional intelligence (e.g., Barling et al., 2000; Barbuto and Scholl, 1998; Bono and Judge, 2004; Hofmann and Jones, 2005; Howell and Avolio, 1993). More specifically, these studies show that the types of leadership behaviors we considered here (e.g., coaching, sharing values, support), are more prevalent among those high on extraversion and emotional intelligence, and those with a strong belief in their ability to influence another’s behavior. That we did not focus on these factors in detail during the focus groups was due, in part, to our interest in contextual factors. It was also due to the fact that the supervisors we interviewed rarely mentioned individual factors as having any influence on their engagement in safety leadership behaviors. This may reflect a general tendency among supervisors within construction to attribute their behaviors externally. However, it may simply reflect the fact that supervisors’ behaviors within construction are most strongly influenced by contextual factors. Future research should compare the contextual factors identified here with the individual factors identified in other work. Moreover, this research should consider the interaction between the two to identify how contextual factors influence the effects of individual factors, and the same in reverse.

A second limitation is that our study focused on the construction industry and so it is not clear how far our findings generalize to other contexts. However, the similarities between some of the finding reported here and those reported for other industries and other countries (Nahrgang et al., 2011) suggest that the findings will be applicable to other contexts. While some idiosyncrasies will emerge (such as the language barriers with migrant labor reported here), the general factors of role overload, support and autonomy are likely to be relatively robust. We would therefore expect safety leadership behaviors in other contexts to be shaped by the same broad factors that we identified in the construction industry.

5. Conclusion

A number of studies have focused on factors that impact safety behaviors within industry. The majority of these studies focus on front-line employees. The current study adopted a different focus and concentrated on supervisors’ safety leadership behaviors. Through focus group discussions with first-line supervisors within the construction industry we identified role overload, production pressure and certain workforce characteristics as hindrances on
supervisors’ safety leadership behaviors. The findings suggest that reducing demands placed on supervisors is one way for organizations to promote supervisors’ safety leadership. Our findings also suggest that the negative effects of demands may be reduced by increasing support between supervisors and offering training in a supervisory role. In doing this, organizations may expect to see an increase in safety leadership behaviors.

Acknowledgements

This study was funded by a research grant provided by the Institution of Occupational Safety and Health. However, the findings, views, and conclusions reported in this paper belong only to the authors and should not be regarded as being endorsed by the funding body or organizations to which the authors are affiliated.

References


