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A program in safety management for the occupational driver: Conceptual development and implementation case study

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ABSTRACT

Road traffic injury is the leading cause of work-related death and serious injury in Australia. Despite this, limited attention has been given to the development and implementation of effective preventive strategies within the workplace setting. A safe driving environment at work not only depends on individual compliance with safe driving practices but on all individuals understanding risks, anticipating threats to safety, showing concern for the safety of others, and contributing to safety improvements in the organisation. In particular, workgroup supervisors play a pivotal role in creating a safe work environment. This paper describes a new and innovative conceptual framework for a program designed to improve work-related driver safety. The focus of this program is on developing the skills of supervisors in identifying situations in which their drivers may be at risk on the road (e.g., drivers are tired, stressed, under pressure to meet deadlines) and to managing these situations through effective safety leadership. This paper describes development of the Safety Management for the Occupational Driver (SMOD) program and an implementation case study.

1. Introduction

Work-related driving is an increasingly important factor in road safety. More than 30% of registered motor vehicles in Australia are fleet vehicles (defined as vehicles which have a business registration or vehicles with a private registration but where the registered operator is an organisation; Haworth and Symonds, 2005). It has been estimated that 33% of work-related fatalities in Australia occur while driving (Driscoll et al., 2005). In New South Wales alone, there were 5.3 fatalities per 100,000 registered fleet vehicle in 2003 (Stuckey et al., 2010) and there is evidence suggesting an over-representation of work-related drivers in road traffic injury compared with non-work-related drivers (Downs et al., 1999; Lynn and Lockwood, 1998; Murray et al., 2003; Newnam et al., 2002). This emerging problem is a global one, with significant proportions of work-related road traffic deaths occurring worldwide (e.g., USA: 22% of work-related fatalities; New Zealand: 16% (Driscoll et al., 2005).

Despite the evidence highlighting the over-representation of work-related road traffic trauma and death, there is limited systematic understanding of the organisational factors influencing the safety of these drivers. Recent research has indicated the importance of leadership on safety outcomes in this context, with a clear finding that leaders play a pivotal role in creating a context where safety is valued and crash involvement is reduced (Newnam et al., 2008). Research has also identified that a leader's concern for a driver, as evidenced through increased safety-related discussions, is associated with safe driver behaviour (Newnam et al., 2012). Despite the establishment of the strong link between leadership and safety outcomes, the literature provides surprisingly little guidance about *how* supervisors can change safe driving at work. More importantly, while the need for the effectiveness of systemic Occupational Health and Safety (OHS) policies and programs are well established and proven to be effective in reducing work-related injury, the vast majority of programs take a reductionist-driver focused approach. This paper discusses a novel approach to address this gap by introducing a safety leadership development program that aims to develop the skills of supervisors in identifying situations in which drivers are at risk of the road and in managing these situations effectively. This program is referred to as *Safety Management for the Occupational Driver (SMOD)*. An implementation case study is also discussed.

Traditionally, preventive strategies to reduce work-related crashes have focused on the individual driver (Newnam and Watson, 2011). This focus is based on the premise that safe driving is contingent on an individual driver's compliance with safety

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procedures. However, as indicated previously, there has been increasing attention on the roles and responsibilities of organisations and management in creating a safety culture and safe workplace and how the social and organisational context shapes individual safe driving beliefs, attitudes, and behaviours (Newnam et al., 2008, 2012; Wills et al., 2009). This research has identified that a safe work environment not only depends on individual compliance with safety procedures, but on all hierarchical levels within a workplace understanding risks, anticipating threats to safety, showing concern for the safety of others, and contributing to safety improvements in the organisation. These aspects of behaviour are considered to go beyond compliance and have been termed "safety participation", because they involve active engagement with safety beyond adherence to rules and regulations (Neal and Griffin, 2006).

The organisational context is important for shaping both safety compliance and safety participation (Griffin et al., 2007). Some evidence suggests that contextual influences, such as leadership, are more strongly related to participation than compliance (Hofmann et al., 2003). However, results from the broad research of work injury are mixed and there is limited empirical evidence specific to the effectiveness of contextual influences on safe driving at work. This absence in the literature represents an important limitation not only in current theory. The SMOD is designed to address this issue by elaborating the role of supervisors in integrating safety compliance and safety participation through identifying elements of supervisory leadership and communication skills that, when developed, facilitate and enhance driver safety.

2. Conceptual background

Supervisors play a critical role in creating a context in which safety is valued and prioritised in the workplace (Newnam et al., 2008, 2012). This role, however, is particularly challenging in work-related driving where the worker is away from the physical work environment (a 'remote worker') which can result in complex and ambiguous line-management relationships. Unlike in other high risk workplace environments (e.g., manufacturing), driving at work can differ from other work tasks and safety responsibilities in important ways. For example, driving activities often fall outside typical line management responsibilities and may be supervised by a person who is not part of the same management structure associated with other work roles (i.e. a fleet manager; Newnam et al., 2008). Despite this ambiguity, supervisors are well-placed to identify situations in which their drivers may be at risk on the road (e.g., drivers are tired, stressed, under pressure to meet deadlines) and to manage these situations effectively (Newnam et al., 2008).

To assist supervisors in better aligning the goals of the organisation to the goals of individual employees, the SMOD draws on a systemic approach to organisational safety to build a more complete picture of supervisory effects on driver safety (see Fig. 1).

The framework identifies four elements of supervisory skill that have been identified as important skills in the safety management of drivers – these elements comprise the developmental components of the SMOD. The role of these supervisory skills in integrating safety compliance and safety participation and the impact on driver safety is elaborated upon, below.

The first element of supervisory skill focuses on motivation. The relationship between motivation and individual safety performance has been well established in the research literature. For example, motivation has been found to exert a strong impact on individual safety performance, with positive effects on safety performance with lags of up to 2 years (Neal and Griffin, 2006). Research has also found strong support for the role of motivation in improving safety outcomes in the work-related driving context (Newnam et al., 2008).

The SMOD extends this literature by examining the role of supervisors' motivation to improve driver safety. Pro-social motivational theories provide the foundation for developing this element of supervisory skill. Pro-social motivation is similar to intrinsic motivation in that it is based on the desire to expend effort to obtain internal reward; however, pro-socially motivated individuals are more likely to expend effort based on the desire to benefit others (Grant, 2008) rather than on interest and enjoyment in the task (Ryan and Deci, 2000). Pro-socially motivated individuals are more likely to be future focused, concerned with achieving a meaningful outcome (Grant, 2008). In support, research has found that pro-socially motivated individuals are less likely to behave in accordance with hedonistic principles and more likely to respond to feedback that benefits the future well-being of others (Korsgaard et al., 1997). Based on this theory, the conceptual framework of the SMOD proposes that a supervisors' skill in identifying situations that reinforce the level of concern for others will have a positive cross-level change effect on the safety behaviour and perceptions of drivers (see Newnam et al., 2012).

The remaining elements of supervisory skill focus on work-role attitudes, including role clarity, self-efficacy and mindfulness. Adapted from a model of work-role performance (Griffin et al., 2007), these work-role attitudes have been identified as individual predictors of work-role performance. These attitudes can be described as follows: *role clarity* refers to the level of certainty in regards to expectations or requirements surrounding a work role (Kahn et al., 1964); *self-efficacy* refers to one's perceived ability to perform a particular task (Gist and Mitchell, 1992); and, *mindfulness* reflects the quality of consciousness in attention and awareness of ongoing events and experiences (Brown and Ryan, 2003), which in this context aligns with the concept of safety climate (i.e., defined as the value and priority given to safety).

Research has identified these elements of supervisory skill important in the safety management of drivers. To illustrate, Newnam et al. (2008) identified that clarity in the role and responsibilities of supervisors in the safety management of drivers

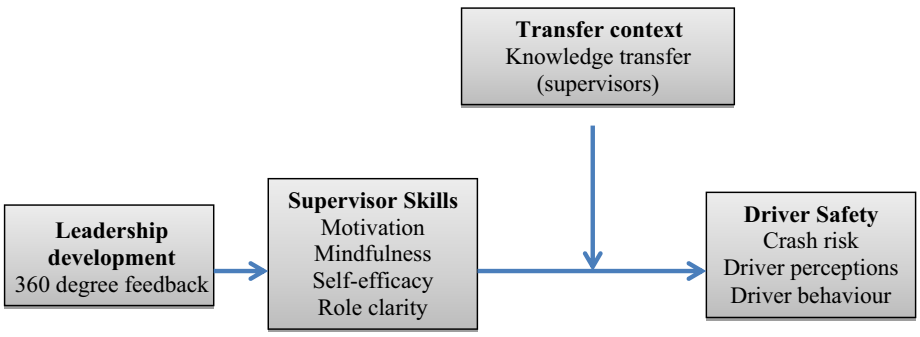

Fig. 1. Conceptual framework.