



## Job Demands–Control–Support model and employee safety performance

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### ABSTRACT

The aim of this study was to explore whether work characteristics (job demands, job control, social support) comprising Karasek and Theorell's (1990) Job Demands–Control–Support framework predict employee safety performance (safety compliance and safety participation; Neal and Griffin, 2006). We used cross-sectional data of self-reported work characteristics and employee safety performance from 280 healthcare staff (doctors, nurses, and administrative staff) from Emergency Departments of seven hospitals in the United Kingdom. We analyzed these data using a structural equation model that simultaneously regressed safety compliance and safety participation on the main effects of each of the aforementioned work characteristics, their two-way interactions, and the three-way interaction among them, while controlling for demographic, occupational, and organizational characteristics. Social support was positively related to safety compliance, and both job control and the two-way interaction between job control and social support were positively related to safety participation. How work design is related to employee safety performance remains an important area for research and provides insight into how organizations can improve workplace safety. The current findings emphasize the importance of the co-worker in promoting both safety compliance and safety participation.

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### 1. Introduction

While occupational health psychology has traditionally used workplace injuries as an indicator of safety failures, some research has begun to investigate more proximal and positive safety-related outcomes, such as the safety-related behaviors that precede and may prevent workplace injuries (e.g., Hofmann et al., 2003; Neal and Griffin, 2006; Turner et al., 2005). Consistent with Borman and Motowidlo's (1997) distinction between task and contextual work performance, Griffin and Neal (2000) have conceptualized two types of employee safety performance: safety compliance and safety participation. Safety compliance corresponds to task performance and includes such behaviors as adhering to safety regulations, wearing protective equipment, and reporting safety-related incidents. Safety participation is parallel to contextual performance and focuses on voluntary behaviors that make the workplace safer beyond prescribed safety precautions, including taking the initiative to conduct safety audits and helping co-workers who are working under risky conditions.

In comparison to other known determinants of safety compliance and safety participation, evidence of the predictive nature of

common work characteristics is limited (Christian et al., 2009). To date, research on work characteristics predicting employee safety performance has tended to focus on safety-specific determinants (e.g., availability of personal protective equipment; DeJoy et al., 2000; safety-specific control; Snyder et al., 2008) rather than more general work characteristics such as job demands, job control, and social support. Evidence of the relationship between work characteristics and employee safety performance tends to be restricted to individual work characteristics (e.g., job demands) on individual dimensions of employee safety performance (e.g., following safety rules) (Nahrgang et al., 2011).

The objective of this study is to investigate how three work characteristics (i.e., job demands, job control, and social support) simultaneously predict both safety compliance and safety participation. We ground our model in Karasek and Theorell's (1990) Job Demands–Control–Support framework, which traditionally examines the additive and interactive effects of these constructs in predicting various health outcomes, such as psychological strain, blood pressure, and cardiovascular disease (Parker et al., 2003). One of the limitations of existing data concerning Karasek and Theorell's (1990) model is the failure of many studies to test the complete model on multiple outcomes simultaneously (van der Doef and Maes, 1999). A key contribution of this paper is a complete test of Karasek and Theorell's (1990) model on a multiple dimensions of employee safety performance.

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