Safety Science 78 (2015) 190–197

Contents lists available at ScienceDirect

Safety Science

journal homepage: www.elsevier.com/locate/ssci

Examining workplace hazard perceptions & employee outcomes in the long-term care industry

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ARTICLE INFO

Article history:
Received 21 May 2014
Received in revised form 25 February 2015
Accepted 12 April 2015
Available online 18 May 2015

Keywords:
Job satisfaction
Occupational safety
Workplace hazards
Physical hazards
Psychological strain

ABSTRACT

The purpose of this study is to examine how workplace hazard perceptions are related to psychological strain and other employee outcomes for direct care workers in long-term care settings. Data were collected from 3068 direct care workers in long-term care. The study used 2 analytical techniques: confirmatory factor analysis (CFA) and structural equation modeling (SEM). CFA tested whether the observed variables measured the latent constructs of psychological strain, workplace hazards, and supervisor support. SEM was used to test direct and indirect relationships among the variables. Perceptions of workplace hazards were significantly and positively associated with psychological strain ($\beta = .50$, $p < .001$), which in turn was related to direct care workers' higher turnover intentions and lower job satisfaction. Support from workplace supervisors did not moderate the workplace hazard risk perceptions–psychological strain relationship.

These findings suggest that direct care workers' perceptions of workplace hazards are related to reduced job satisfaction and higher intentions to quit. Our findings identify the need for organizations to reduce physical hazards in the workplace and acknowledge how perceptions of workplace hazards may reduce workers' psychological health.

1. Introduction

In the United States of America (U.S.), workplace injury statistics show that healthcare providers are among the occupational groups most frequently injured while on the job (Castle et al., 2009). In 2011, U.S. Department of Labor Secretary Solis identified the healthcare industry as a major source of all U.S. workplace injuries, noting that more workers are injured in the healthcare and social assistance industry sectors than in any other, and that this group of workers had one of the highest rates of occupational injuries and illness at 5.2 cases for every 100 workers (Occupational Safety and Health Administration, 2011). More specifically, workplace hazards contributed to approximately 1.15 million non-fatal workplace injuries/illnesses requiring a median of 9 days of work absence as a result, with the health care industry accounting for 18% of these injuries (United States Department of Labor, 2013a). Furthermore, the healthcare provider sub-group that includes nursing aides and orderlies who provide the majority of direct care in the long-term care (LTC) industry is among the occupational sub-groups with the highest incidents of workplace injury (Castle et al., 2009). Providers in long-term and residential care facilities average 7.9 incidents per 100 workers; this is in contrast to employees in traditionally high-injury occupations such as mining/natural resources, which average 3.8 incidents per 100 workers, and manufacturing, which average 7.3 incidents per 100 workers (United States Department of Labor, 2013b).

Given these injury rates, direct care workers (defined here as nursing aides, orderlies, and attendants) may perceive their work environment as potentially unsafe and hazard prone. Perceptions of workplace hazards act as a workplace stressor (Carr et al., 2003; Danna and Griffin, 1999; Neal and Griffin, 2004). This is problematic in that workplace stressors are linked to negative mental health, onset and progression of physical illnesses, and poorer outcomes for the worker and the organization (Jackson, 2002; Sauter et al., 1999). The intersection of these relationships suggests that perceptions of workplace hazards may act as a

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http://dx.doi.org/10.1016/j.ssci.2015.04.013
0925-7535/

stressor preceding subsequent employee responses (i.e., psychological strain) and, in turn, have a negative relationship with key employee outcomes (i.e., job satisfaction, turnover) (Neal and Griffin, 2004; Parker et al., 2003).

Within the LTC industry, few studies have examined direct care workers' (DCWs) perceptions of workplace hazards and its relationship with psychological strain and employee outcomes. This study examines the relationship between perceptions of workplace hazards and DCWs' psychological strain in LTC work settings. This research makes a contribution to the DCW literature by showing how workplace hazard perceptions may function as a stressor related to negative employee outcomes, and that this relationship is mediated by DCWs' psychological strain.

1.1. Theoretical background

Within the occupational stress literature, many models explicate workplace stress and its influence on individuals and organizational outcomes (e.g., Cooper et al., 2001; Danna and Griffin, 1999; Hurrell, 1987). Despite some theoretical divergence, common areas of convergence note environmental demand factors create stressors, individuals have affective responses to the stressors, and the resultant strain negatively influences generalized outcomes (Cooper et al., 2001; Hurrell, 1987; Jex and Bliese, 1999).

One of the most comprehensive workplace stress models that capture the relationship between work environmental factors and worker reactions was developed by the National Institute for Occupational Safety and Health (NIOSH), the Model of Job Stress and Health (Hurrell, 1987). This multi-faceted model views the interaction between work environment and worker as a source of stressors that can lead to disrupted employee and organizational outcomes. This relationship is subsequently influenced by various individual and organizational factors. The NIOSH Model postulates that job stressors originate in various workplace factors, including job demands, organizational factors, and environmental conditions. Job stressors contribute to workers experiencing acute reactions (strain), which manifests as negative psychological, physiological, and behavioral responses. The strength of the NIOSH Model (Hurrell, 1987) is its inter-related stressor/strain/outcome pathway, moderated by varying individual and environmental factors. Numerous studies show support for stress models of this type and demonstrate that stress effects manifest within this stressor/strain/outcome relationship (Cooper et al., 2001; Sauter et al., 1999; Sikora et al., 2004).

1.2. Workplace hazard perceptions

Workers exposed to elevated risks of physical danger tend to function in states of constant arousal and readiness that likely have long-term adverse effects on their overall health (Cooper et al., 2001). Workplaces that are characterized by hazards such as violence, abuse, and high injury risk have also been linked to adverse health outcomes for employees (Geiger-Brown et al., 2004; Jackson et al., 2002; Taylor et al., 1997). Healthcare environments tend to have high employee injury rates, foster high levels of employee stress, and employees report greater stress from workplace risk factors than many other occupations (Hoskins, 2006; Occupational Safety and Health Administration, 2011; Pyper, 2004; United States Department of Labor, 2013a), thus engendering both greater perceived and actual workplace hazard.

Cox and Tail (1991) described risk perception as a worker's recognition of a hazard's capacity to harm and the probability of being harmed. Previous research has shown that workplace hazards for DCWs include getting hurt (such as falls or strains), or getting sick (through exposure to illnesses) (Nielsen and Austin, 2005). Perceived risk of workplace injury is a predictor of worker attitudes, behavior and increased stress as well as fatigue, lower physical and mental health, and reduced job satisfaction (Evans et al., 2012; McCaughey et al., 2011). Furthermore, occupational and workplace hazards are associated with outcomes such as burnout and exhaustion (Leiter and Robichaud, 1997). Based on this previous literature, we propose that DCW workplace hazard perceptions can function as a stressor within the stressor/strain/outcome relationship. Our conceptual model of a workplace hazards/psychological strain/employee outcome relationship mirrors that of the NIOSH Model (Hurrell, 1987). Therefore, we expect that workplace hazard perceptions will be related to employee strain. Therefore:

Hypothesis 1. Direct care workers' perceptions of workplace hazards will be positively related to DCWs' psychological strain.

The occupational stress literature also identifies a robust link between high levels of workplace stress and negative employee outcomes such as lower job satisfaction (i.e., lower general positive attitude of employees toward their jobs) and increased turnover intention (i.e., employee's plan to change job voluntarily) (Cooper et al., 2001; Danna and Griffin, 1999; Karasek and Theorell, 1990). We posit that these findings are valid in the context of healthcare workplaces, and we envisage that the workplace hazards/psychological strain/employee outcome relationship for the DCW workforce will mirror the above findings. Consistent with a large body of empirical research (Schaubroeck et al., 1989; Jex, 1998), psychological strain will be related to lower DCW job satisfaction and higher turnover intent. Therefore:

Hypothesis 2. Direct care workers' perceptions of workplace hazards will be related to (2a) lower job satisfaction and (2b) higher employee turnover intentions.

Finally, the nature of the stressor/strain/outcome relationship suggests that strain reactions will function as a mediating variable between the stressor (perceptions of workplace hazards) and employee outcomes (job satisfaction and turnover intent). Therefore:

Hypothesis 3. Psychological strain will mediate the relationship between DCW perceptions of workplace hazards and both (3a) job satisfaction and (3b) turnover intent.

1.3. The role of supervisor support

The NIOSH Model also postulates that environmental and external factors which serve to buffer individual reactions to stressors govern the stressor/strain/outcome relationship (Cohen and Wills, 1985; Hobfoll, 1988; Hurrell, 1987; Shields, 2002, 2004). Moderating factors (buffers) function specifically to reduce the strength of the stressor/strain relationship within the larger stressor/strain/outcome relationship.

One such buffering factor, social support, is a primary resource for managing stressful circumstances, and is linked to positive physical and psychological outcomes (Cohen and Wills, 1985; Cooper et al., 2001; Hobfoll, 1988; Hurrell, 1987; McIntosh, 1991; Shields, 2004; Statistics Canada, 2001). For example, support from workplace supervisors promotes stress reduction; it weakens the stressor/strain relationship, thereby aiding in the prevention of harm from stress (Cooper et al., 2001; Hurrell, 1987; Lazarus and Folkman, 1984; McIntosh, 1991). Social support also enhances health and well-being, and directly mitigates the potential effects of job stressors (Cooper et al., 2001; Hurrell, 1987; Joiner and Bartram, 2004). Moreover, both positive relations and positive perceptions of workplace support are consistently associated with