

WHO NEEDS CARING? WE DO! WORKPLACE INJURY AND ITS EFFECT ON HOME HEALTH AIDES

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ABSTRACT

This study examined the effects of workplace injury on home health aides. It was found that injured workers had lower job satisfaction, higher turnover intent and poor employment and care quality perceptions. Poor training and poor supervisory support were significantly related to higher risk of workplace injuries.

INTRODUCTION

In 2009, the Bureau of Labor (2009a, 2009b) reported a direct care workforce (e.g. nursing assistants and home health aides) of approximately 2.3 million workers. Concurrently, there is a growing shortage of direct care workers and many reports highlight home health agency worker shortages; with some estimating annual turnover rates from 50% to 75% (Institute of Medicine, 2008; General Accounting Office, 2001). Turnover costs in the direct care workforce are staggering and care facilities can ill afford to bear the expense. With increasing worker shortages and high turnover, direct care worker recruitment and retention is a key factor in meeting the future health care needs of society's aging population (Bureau of Labor, 2009a, 2009b). Another contributor to the difficulties of recruiting and retaining direct care workers is the cumulative effect of the work environment on worker health and well-being. The physical and emotional demands of working directly with clients/residents are tremendous and numerous workers cite these factors as key reasons for leaving their profession (Mittal et al., 2009). Compounding these factors, the exceptionally high injury rates in this profession highlight a fundamental factor in direct care worker recruitment and retention (Bureau of Labor, 2008). If direct care worker injury is associated with turnover, it becomes important to investigate the nature of worker injury and determine how cumulative worker injury contributes to negative outcomes. As such, the purpose of this study is to explore the relationship between direct care worker (home health aides) injury rates and key outcomes such as job satisfaction, turnover intent, and perceived quality of care offered to clients/ residents.

The Negative Effects of Occupational Health and Safety Hazards

Organizational research has identified various factors found within the workplace environment as having an influence on employee well-being (Carr, et al., 2003; Parker et al., 2003). Workplaces that are characterized by abuse, high strain, chronic stress, and low decision autonomy have been linked to adverse health outcomes for the employee (Taylor, et al., 1997; Jackson, et al., 2002). The health care industry, while not typically classified as a "high-risk"

occupation, serves as an excellent example of a workplace posing many threats to employees. Within the organizational environment, health care workers are consistently exposed to occupational health hazards including emotional demands, psychosocial work stress, aggressive patients, and workplace violence (Mittal, et al., 2009; Stone, et al., 2007). Occupational health and safety hazards play a part in establishing the general work environment of health care workers. Negative and/or unsafe work environments have been found to exert a strong influence on health care workers and hold the potential to negatively influence well-being and work performance (Bishop, et al., 2009; Morris, 2009; Stone et al., 2007).

While less frequently studied, the work environment of direct care workers and home health aides has also been found to exhibit many of the similar relationships among occupational health and safety factors and worker outcomes. The work environment itself is a concern as home health aides cite the uncertainty of entering a client's home as a major source of concern related to their satisfaction and overall safety (Markkanen, et al., 2007). Not surprisingly, these factors have been found to contribute to the ongoing turnover problems in the direct care workforce (Charney & Schirmer, 2007; Institute of Medicine, 2008). These findings offer support for the argument that direct care worker occupational health and safety is of paramount importance and there is a critical need to further investigate the effects of worker injury.

The Negative Effects of Health Care Worker Injury

The reduction of workplace and worker injury is so vital the National Institute for Occupational Safety and Health (NIOSH) has developed a research agenda to coordinate the national occupational safety and health research. As part of the research agenda, NIOSH/NORA specifically identified the health care sector as a high risk industry (NIOSH, 2002). Targeting occupational health and safety within health care is important for two reasons. First, worker injury/illness and compensation statistics illustrate that workers in the health care industry remain among the occupational sub groups with the highest rates of workplace injuries and illnesses in North America (Bureau of Labor, 2008; Statistics Canada, 2005). Second, the outcomes of health care worker injury have been found to have negative repercussions for the organizations, the workers, and the clients/residents.

The NIOSH/NORA Work Organization Framework for Occupational Illness and Injury highlights the cascading relationships from the manner in which work is organized, to worker exposure to hazards, and to worker injury/illness (see NIOSH, 2002 for detailed model). We suggest that the workplace environment and job demands of direct care workers equates to the NIOSH/NORA concept 'organization of work' which has been shown to contain workplace hazards that result in direct care worker injuries. Therefore, the paper proposes that direct care worker injury is an important factor to investigate in order to understand the potentially negative outcomes for direct care providers. The paper also proposes an extension to the NIOSH/NORA Work Organization Framework for Occupational Illness and Injury that is inclusive of the effects of worker injury. Based on this proposal, it is hypothesized that injured home health aides are more likely to be dissatisfied with their jobs, have greater turnover intent, and perceive both their jobs and the quality of the care offered by their employer as being poor than non-injured home health aides. The following is a recap of the proposed hypotheses:

Hypothesis 1: The relationship between injuries and outcomes will be such that the more frequently a home health aide has been injured on-the-job, there will be a: 1a) negative relationship with job satisfaction, 1b) positive relationship with turnover intent, 1c) negative

relationship with willingness to recommend the agency as a place to work, and 1d) negative relationship with willingness to recommend the agency as a place to seek care services from.

Efficacy of Occupational Health & Safety Training

A unique contribution of The NIOSH/NORA Work Organization Framework for Occupational Illness and Injury (NIOSH, 2002) is the inclusion of ‘safety and health services programs’ as an intervening variable that can influence the work organization/work hazards relationship as well as the work hazards/worker injury relationship. The safety and health services programs variable suggests there is a place within occupational health and safety to enact programs and training directed toward reducing the incidents of worker injury (McPhaul & Lipscomb, 2004; NIOSH, 2002). Training for direct care workers and home health aides frequently fails to adequately prepare these workers for managing the complex nature of their jobs (Stone, 2004). However, effective training has been found to be valuable as home care workers who believed they were properly trained and therefore confident to do their jobs were less likely to report turnover intentions (Morris, 2009). To account for training and the high injury rates experienced by direct care workers, the authors argue that research directed at understanding how the work environment influences the occupational health and safety of direct care workers needs to include consideration of the efficacy of training in reducing or preventing injuries for workers in health care (Institute of Medicine, 2008; NIOSH, 2002).

During the literature review, only two studies were located that examined the efficacy of training programs on injuries sustained by home health aides. Results from these studies were mixed and offered no consistent training/injury relationships (Craib et al., 2007; Massy-Westropp & Rose, 2004). The small number of studies underscores the need for additional research focusing on the relationship between training and injury rates for home health aides. However, the preliminary findings do suggest that interventions and training directed at improving direct care worker knowledge, skills, and abilities regarding care provision and workplace safety maybe more effective than recognized, offering some empirical support for the above-cited NIOSH/NORA framework (2002). Stemming from these results, the authors hypothesize that home health aides who receive training are less likely to be injured on-the-job than home health aides who do not receive training. Furthermore, studies have found that many of the detrimental effects of poor work environments are ameliorated by the presence of a supportive supervisor (Cooper, et al., 2001; Murphy & Schoenborn, 1987). These findings suggest that in workplaces in which employees perceive high supervisor support, incidents of worker injury will be lower. The following is a recap of Hypothesis 2:

Hypothesis 2: The relationship between training and injuries will be such that: 2a) home health aides who do not believe their job training has prepared them to do their jobs will have higher risk of injury than home health aides who do believe their job training has prepared them to do their jobs and 2b) home health aides who rate their supervisor support as poor will have higher risk of injury than home health aides who rate their supervisor support as good.

METHODS

Data and Sampling

Data for this analysis are from the 2007 National Home Health Aide Survey, a national probability survey of home health aides sponsored by the United States Department of Health and Human Services' Office of the Assistant Secretary for Planning and Evaluation and conducted by the Division of Health Care Statistics (see USDHHS, 2007 for complete data and sampling information).

Measures

Number of Injuries. Home health aides were asked how many times they were hurt or injured on-the-job since starting their position or in the past 12 months.

Overall Ratings of Training. A single item was used; participants were asked "how well their home health training prepared them for work in a home health setting."

Supervisor Support. Four items about supervisors' openness and guidance were used: 1) My supervisor provides clear instructions when assigning work; 2) My supervisor is supportive of progress in my career, such as further training; 3) My supervisor listens to me when I am worried about a patient's care; and 4) My supervisor tells me when I am doing a good job.

Worker and Organizational Outcomes. Four measures were used in this study to measure worker outcomes and organizational outcomes. The two worker outcome measures were: 1) job satisfaction and 2) turnover intent. The two organizational outcome measures were: 1) willingness of the worker to recommend her/his health care agency as a place to work and 2) willingness of the worker to recommend her/his health care agency as a place to receive care.

Control Variables. The following characteristics were included: age, education, race, primary language, and annual income. The organizational characteristics included chain membership, profit status, and the type of care provided by the agency (e.g. hospice or home).

RESULTS

An analysis of the descriptives identified no multicollinearity issues (Tabachnick & Fidell, 2001). In terms of the number of injuries, the majority of home health aides (81.5%) did not report injuries during the past year. Out of the 3,375 home health aide participants, only 624 (18.5%) reported having had at least one injury. Most workers rated their training as effective, saying it either made them "well prepared" or "somewhat prepared" for their responsibilities. However, when associated with the number of injuries, a lower percentage of "positive" ratings was found in the higher number of injuries group. In other words, as injury quantity increased, ratings of training preparedness decreased. While 77% of the home health aides without an injury rated their training as making them "well prepared", only 51% of the home health aides who had been injured multiple times rated their training as making them "well prepared".

This study hypothesized that the number of injuries home health aides experience would have a significant relationship with their job satisfaction, turnover intent, willingness to recommend their agency as a place to work, and willingness to recommend their agency as a place to seek care services. Multivariate regression analysis showed that the number of injuries reported by home health aides is negatively related to job satisfaction ($\beta = -.119$, $p\text{-value} < .001$) and willingness to recommend their agency as a place to work and as a place to seek care ($\beta = -.099$ & $-.111$, $p\text{-value} < .001$ for both) offering support for H1a, H1c and H1d. Moreover, in support of H1b, the number of injuries was found to be positively associated to turnover intent

($\beta = .069$, $p\text{-value} < .001$) (For further details on these significant relationships and those with the control variables, please contact the authors).

The results of multinomial logistic regression show that home health aides in the “not at all prepared” training group relative to “well prepared” training group (reference) have a 3.05 times higher likelihood of being injured relative to the non-injured group ($\exp \beta = 3.05$, $p\text{-value} < .001$). For the “not at all prepared” training group, the relative risk for being injured due to lack of/poor training increased as the number of injuries increased ($\exp \beta = 4.70$ for injury=2, $p\text{-value} < .05$, $\exp \beta = 8.10$ for injury=3, $p\text{-value} < .001$). For aides who believe their training made them “somewhat prepared” to do their jobs, the odds ratio of being injured on-the-job once are not significant. Overall, these findings offer support for H2a, home health aides who *do not* believe their job training has prepared them to do their jobs will have higher risk of injury than home health aides who *do* believe their job training has prepared them to do their jobs.

Home health aides’ rating of supervisor support was found to have a significant relationship with two of the three injury groups. Home health aides in the poor supervisor support group have a 1.5 times higher likelihood of having one on-the-job injury and a 3.1 times higher probability of having three injuries versus their counterparts who rated supervisory support as good. These findings offer support for H2b, home health aides who rate their supervisor support as poor will have higher risk of injury than home health aides who rate their supervisor support as good.

DISCUSSION

Using the NIOSH/NORA Work Organization Framework for Occupational Illness and Injury (NIOSH, 2002) as a basis, this study examined a number of occupational health and safety factors involving worker injuries, worker/organizational outcomes, and worker training in the health care industry. Unique to the study was the investigation of these factors with home health aides, an infrequently studied group of workers who are members of an occupational sub-group with one of the highest rates of workplace injuries (Bureau of Labor, 2008). The results provided strong empirical support for the NIOSH/NORA Work Organization Framework for Occupational Illness and Injury (NIOSH, 2002) and the study’s hypotheses. Hypotheses suggesting relationships between worker injury and poor worker and organizational outcomes were supported. Additionally, analysis revealed that worker perceptions of the quality of her/his training have a significant relationship with the number of injuries direct care workers report. These relationships mirror the NIOSH/NORA framework’s organization of work/worker hazards/injury relationships moderated by safety and health services/programs.

As other occupational health and safety studies have shown, repetitive worker injuries are detrimental to the worker, the organization, and performance outcomes (Burke & Sarpy, 2003; Burke et al., 2006). The study’s findings that home health aides who experience job-related injuries have lower levels of job satisfaction and increased intentions to turnover mirror many studies investigating direct care worker experiences. (Benjamin & Matthias, 2004; Dawson & Surpin, 2001; Yamada, 2002). Moreover, the findings also link home health aide injuries to poor organizational outcomes; home health aides who have been injured are less likely to recommend their agency as a place to work or seek care services. The current findings that home health aides who perceive poor supervisory support are more likely to experience workplace injuries is very much in alignment with other direct care worker studies that offer evidence of the negative effects of poor supervisor support on direct care worker outcomes, including turnover, stress, and

job dissatisfaction (Stone, 2004). These findings are consistent with studies in acute care settings investigating the interlocking relationships among managerial actions, health care provider injuries, and poor employee/organizational outcomes (Burke et al., 2006; Charney, & Schirmer, 2007; Li, et al., 2004; Vredenburg, 2002).

Implications for Management

When direct care workers are injured, organizations bear the costs of workers' compensation, replacement staff, potential overtime, and sick pay among other expenses. Reducing these costs will benefit the organization directly (costs and expenses) and indirectly (quality of care, referrals, reputation, etc). As this study has shown, the link between worker injury and negative outcomes for an organization is significant and has the potential to be cost-prohibitive. Given that health and safety programs have been shown to effect positive worker outcomes and reduce the incidents of injury (Burke et al., 2006; Stone & Wiener, 2001), it becomes evident that organizations will benefit financially from investing resources into creating effective occupational health and safety training programs.

LIMITATIONS & FUTURE DIRECTIONS

We acknowledge the limitations of our study. Our findings are derived from a secondary analysis of a national survey. The study design and indices used in the survey were not specifically targeted at evaluating the effects of worker injury and training (USDHHS, 2007). As such, while our findings are relevant and important they are not generalizable outside of this study. In addition, the constructs in this study share a common method of measurement, and as such, common-method bias could also be a concern resulting from the single-source data (Podsakoff, et al., 2003). However, the differentiated relationships between the variables reduce the possibility of this common-method bias. Longitudinal designs with multi-source data would provide stronger tests of the hypotheses.

Further research is needed to specifically examine the relationship of worker injury to workplace outcomes for direct care workers, specifically home health aides, as injury and worker outcomes are understudied with this occupational subgroup (Institute of Medicine, 2008; Stone & Wiener, 2001). Additional research is needed to better understand the most efficacious types of worker training and to determine what forms of safety training reduce incidents of worker injury (Goldenhar, et al., 2001). Finally, to create successful training initiatives, research needs to establish how and when training occurs and to help determine what the structure of direct care worker training should be.

The NIOSH/NORA Work Organization Framework for Occupational Illness and Injury (NIOSH, 2002) offers a clear framework from which to develop occupational health and safety interventions derived from the work environment. The framework can be used as a tool for minimizing workplace hazards and subsequently reducing worker injury. This study offers preliminary empirical support for the framework and provides a roadmap to improve the quality of the environment for direct care workers and minimize the negative effects of worker injuries.

REFERENCES AVAILABLE FROM THE AUTHORS