



Changes in hospital nurse work environments and nurse job outcomes: An analysis of panel data

Ann Kutney-Lee^{*}, Evan S. Wu, Douglas M. Sloane, Linda H. Aiken

Center for Health Outcomes and Policy Research, School of Nursing, University of Pennsylvania, Philadelphia, United States

ARTICLE INFO

Article history:

Received 3 May 2012

Received in revised form 16 July 2012

Accepted 18 July 2012

Keywords:

Burnout

Intention to leave

Job satisfaction

Nurse management

Nurse staffing

Nurse retention

Nurse work environments

ABSTRACT

Background: One strategy proposed to alleviate nursing shortages is the promotion of organizational efforts that will improve nurse recruitment and retention. Cross-sectional studies have shown that the quality of the nurse work environment is associated with nurse outcomes related to retention, but there have been very few longitudinal studies undertaken to examine this relationship.

Objectives: To demonstrate how rates of burnout, intention to leave, and job dissatisfaction changed in a panel of hospitals over time, and to explore whether these outcomes were associated with changes in nurse work environments.

Methods: A retrospective, two-stage panel design was chosen for this study. Survey data collected from large random samples of registered nurses employed in Pennsylvania hospitals in 1999 and 2006 were used to derive hospital-level rates of burnout, intention to leave current position, and job dissatisfaction, and to classify the quality of nurses' work environments at both points in time. A two-period difference model was used to estimate the dependence of changes in rates of nurse burnout, intention to leave, and job dissatisfaction on changes in nurse work environments between 1999 and 2006 in 137 hospitals, accounting for concurrent changes in nurse staffing levels.

Results: In general, nurse outcomes improved between 1999 and 2006, with fewer nurses reporting burnout, intention to leave, and job dissatisfaction in 2006 as compared to 1999. Our difference models showed that improvements in work environment had a strong negative association with changes in rates of burnout ($\beta = -6.42\%$, $p < 0.01$) intention to leave ($\beta = -4.10\%$, $p < 0.01$), and job dissatisfaction ($\beta = -8.00\%$, $p < 0.01$).

Conclusions: Improvements in nurse work environments over time are associated with lower rates of nurse burnout, intention to leave current position, and job dissatisfaction.

© 2012 Elsevier Ltd. All rights reserved.

What is already known about the topic?

- Nurse work environments are predictive of nurse job outcomes associated with retention, including burnout, intention to leave, and job satisfaction.
- Most studies of the association between nurse work environments and nurse job outcomes have been cross-sectional.

What this paper adds

- This study provides longitudinal evidence that improvements in hospital nurse work environments are associated with reductions in poor nurse job outcomes over time.
- The findings of this study provide stronger evidence to support current initiatives to improve hospital nurse work environments.

1. Introduction

Improving the quality of healthcare is an international priority in which nurses play an essential role; yet many

^{*} Corresponding author.

E-mail address: akutney@nursing.upenn.edu (A. Kutney-Lee).

countries are faced with having too few nurses to meet the needs of their citizens (Buerhaus et al., 2009; Oulton, 2006; Sermeus and Bruyneel, 2010). Nursing shortages can be particularly felt in acute care hospitals, where patient complexity and workload demands are rapidly increasing (Rechel et al., 2009). At the same time, hospital nurses in many countries have been identified as having high levels of dissatisfaction and burnout, while many intend to leave their current job (Aiken et al., 2012; Estryn-Behar et al., 2007). One strategy that has been suggested to alleviate nursing shortages is the promotion of organizational efforts to improve recruitment and retention of staff (Van den Heede et al., 2011).

A number of studies have shown that the environment in which nurses work, a modifiable organizational feature of hospitals, is an important determinant of work-related outcomes, including burnout levels, intention to leave positions, and job dissatisfaction (Aiken et al., 2011a; Hasselhorn et al., 2006; Van Bogaert et al., 2010). Moreover, the link between unfavorable work environments and poor nurse outcomes appears to be a global phenomenon. In a recent study of nurses in 12 countries in Europe (RN4CAST) and the United States, Aiken et al. (2012) revealed that the odds of nurses reporting high levels of burnout, intention to leave, and job dissatisfaction were lower in hospitals with better work environments than in hospitals with poor environments, and that these differences were similar in both European and U.S. hospitals. These relationships have also been confirmed in several Asian countries (Aiken et al., 2011b). In another large survey of nurses, the European Nurses' Early Exit (NEXT) study found that poor working conditions were the most common reason nurses offered for leaving their current position (Estryn-Behar et al., 2010). Moreover, nurses' job satisfaction and burnout are highly associated with quality of patient care, including mortality (Aiken et al., 2002), patient safety (Aiken et al., 2012), and the patient experience of hospital care (Aiken et al., 2012; McHugh et al., 2011; Vahey et al., 2004).

One shortcoming of this growing international evidence base is that it consists primarily of evidence from cross-sectional studies. Unfortunately, there is very little evidence that changes in a hospital's nurse work environment over time are related to changes in a hospital's rates of nurse burnout, intention to leave, and job dissatisfaction. Longitudinal data would provide hospital administrators and policymakers with a stronger empirical case to improve nurse work environments. The European NEXT survey was longitudinal in design and prospectively surveyed nurses at two points in time (Hasselhorn et al., 2006). The most recent longitudinal analyses of those data have focused on individual nurse perceptions about work-related factors and intention to leave (Estryn-Behar et al., 2010; Hasselhorn et al., 2008). In the United States, Spetz (2008) used random samples of nurses at two points in time to document an increase in nurses' job satisfaction after staffing levels and working conditions improved due to the implementation of California's mandated staffing ratios. Spetz, however, was unable to link nurses to their employing hospitals. Therefore, it is not clear whether the increase in nurse satisfaction was any more pronounced in

hospitals that improved their staffing than in those that witnessed no change in staffing, or a negative one. Our study fills a gap in the literature by exploring how changes in work environments at the hospital-level are associated with rates of unfavorable nurse outcomes.

The current study presents data from hospitals in Pennsylvania, one of the most populous and geographically diverse states in the U.S. In 1999, a survey of Pennsylvania nurses revealed that over 40% of staff nurses were dissatisfied with their jobs and experienced high burnout levels, while nearly a quarter were planning to leave their current positions within the next year (Aiken et al., 2002). We use these same data from 1999, and merge those data with survey data from 2006 to construct a two-wave panel of hospitals. We demonstrate how nurse outcomes changed in a set of 137 Pennsylvania hospitals between 1999 and 2006, and how these outcomes may have been influenced by changing work environments, accounting for concurrent changes in staffing levels.

2. Methods

A retrospective, two-stage panel design was used for this study and involved the use of two types of data from 1999 and 2006: nurse survey and administrative hospital data. There were 137 hospitals for which both sources of data were complete and available at both points in time. This study was reviewed and approved by the University of Pennsylvania Institutional Review Board.

2.1. Data sources and study sample

2.1.1. Nurses

Data from the Pennsylvania Registered Nurse Survey (1999) and Multi-State Nursing Care and Patient Safety Survey (2006), both collected by the University of Pennsylvania, were used for this study (Aiken et al., 2002, 2011a). Mail surveys were used to collect job-related data from large random samples of all licensed Pennsylvania nurses in 1999 (50%) and 2006 (40%). All nurses were asked to identify their work setting. Hospital nurses were additionally requested to name their employer. Identical items regarding workload, the work environment, job outcomes, and demographics were asked in both the 1999 and the 2006 surveys. More than 42,000 nurses (52% response rate) returned the survey in 1999, while over 25,000 nurses (39% response rate) responded in 2006. A double sample of 650 non-responders was drawn in 2006 and results from that analysis showed no evidence of response bias on the primary variables of interest (Smith, 2008). The representativeness of the nurses at both time points was confirmed by comparing a set of basic demographic characteristics from the survey with the responses of Pennsylvania nurses in the 2000 and 2008 National Sample Survey of Registered Nurses (Spratley et al., 2000; U.S. Department of Health and Human Services, 2010). About one-third of respondents in both years worked as acute care hospital staff nurses. This set of nurses comprised the analytic sample for this study, and included 9345 nurses in 1999 and 5957 nurses in 2006. In 1999, about 70 nurses from each hospital responded, while

Download English Version:

<https://daneshyari.com/en/article/1076427>

Download Persian Version:

<https://daneshyari.com/article/1076427>

[Daneshyari.com](https://daneshyari.com)