

## Effects of Nursing Leadership on Nurse Burnout and Care Quality: A Structural Equation Modeling Analysis

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**Introduction:** Previous studies suggested that nurses were less likely to report burnout and poor quality of care in hospitals with better work environments (Kutney-Lee et al., 2015; Liu et al., 2018; Stimpfel, Rosen, & McHugh, 2015). Nurses' poor wellbeing and burnout were also associated with poor quality of care and were regarded as mediators in the relationship between hospital organizational factors and quality of care in some current studies (Hall, Johnson, Watt, Tsipa, & O'Connor, 2016; Liu et al., 2018). As one aspect of work environment, nursing leadership is critical in creating a positive and supportive work environment (Lewis & Cunningham, 2016). However, limited evidence showed the relationships between nursing leadership and nurse burnout and quality of care.

**Objective:** To explore the effects of nursing leadership on nurse burnout and quality of care.

**Methods:** This was a cross-sectional study conducted in 23 hospitals in Guangdong province, China in 2014. It was a questionnaire survey, and data from 1,582 nurses responsible for direct patient care on 111 randomly sampled medical and surgical units was analyzed. Nursing leadership was measured by the Nurse Manager Ability, Leadership, and Support Subscale of the Practice Environment Scale of Nursing Work Index (Lake, 2002). Nurse burnout was measured by Maslach Burnout Inventory-Human Services Survey, which includes emotional exhaustion (EE) subscale, depersonalization (DP) subscale, and personal accomplishment (PA) subscale (Maslach & Leiter, 2008). Quality of care was measured by three widely used items indicating nurses' perception of overall quality of care (Aiken, Sloane, Bruyneel, Van den Heede, & Sermeus, 2013) on their units (i.e., *What do you think about the quality of care patients receive on your unit? How much confidence do you have in management solving patients' problems as reported by nurses? and Please give a comprehensive assessment of the patient safety on your unit.*) Structural equation modeling with maximum likelihood estimator was used to examine a hypothesized model that supposed nursing leadership had effects on nurse burnout directly, and on quality of care both directly and indirectly through nurse burnout.

**Results:** The findings supported our hypothesized model [Comparative Fit Index (CFI)=.923 (>.90), Tucker-Lewis Index (TLI)=.908 (>.90), Standardized Root Mean Square Residual (SRMR)=.057 (<.08), and Root Mean Square Error of Approximation (RMSEA)=.057 (95% CI: .053-.061) (<.08)]. Supportive nursing leadership was directly associated with lower levels of nurse EE ( $\beta=-.331$ ,  $p<.001$ ), DP ( $\beta=-.387$ ,  $p<.001$ ), and higher levels of PA ( $\beta=.271$ ,  $p<.001$ ) significantly, which in turn directly associated with higher quality of care respectively (EE: $\beta=-.177$ ,  $p=.020$ ; DP: $\beta=-.226$ ,  $p=.007$ ; PA: $\beta=.109$ ,  $p=.001$ ). Additionally, supportive nursing leadership had a positive direct effect on quality of care ( $\beta=.286$ ,  $p<.001$ ) and positive indirect effects on quality of care through the mediation of EE ( $\beta=.059$ ,  $p=.024$ ), DP ( $\beta=.087$ ,  $p=.008$ ), and PA ( $\beta=.030$ ,  $p=.002$ ). The model estimated 10.9%, 14.9%, 7.3%, and 35.2% of the variance in nurse EE, DP, PA, and quality of care, respectively.

**Conclusion:** Effective nursing leadership plays an important role in improving both nurse and patient outcomes. Efforts to improve nursing leadership would not only help relieve nurse burnout, but also benefit quality of care improvement.

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**Title:**

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**Keywords:**

burnout, leadership and quality of care

**References:**

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**Abstract Summary:**

This study used a novel approach to examine the impact of good nursing leadership on provider wellbeing and clinical care, providing with evidence about patient safety and quality of care improvement.

**Content Outline:**

- **Introduction :**
- Why this topic is important? Effective strategies that are helpful to improve care givers' and patients' outcomes are important to healthcare system.
- What is already known? Nurses were less likely to report burnout and poor quality of care in hospitals with better work environments. Nursing leadership is critical in creating a positive and supportive work environment.
- Aim of this study. To explore the impact of nursing leadership on nurse burnout and quality of care.

- **Main findings:**

**Main point #1:** Improving nursing leadership may help reduce nurses' burnout.

Supporting point: Supportive nursing leadership was directly associated with lower levels of nurse emotional exhaustion, depersonalization, and higher levels of personal accomplishment significantly

**Main point #2:** Improving nursing leadership may help promote quality of care.

Supporting point:

a. Supportive nursing leadership had a positive direct effect on quality of care.

b. Supportive nursing leadership had positive indirect effects on quality of care through the mediators of nurse emotional exhaustion, depersonalization, and personal accomplishment.

- **Conclusion:**

Efforts to improve nursing leadership would not only help relieve nurse burnout, but also benefit quality of care improvement.

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