Patient Safety Culture and Patient Safety Outcomes in Saudi Arabia: Perceptions of Expatriate Nurses

Amal Alharbi and V. Susan Dahinten
University of British Columbia, School of Nursing, Vancouver, Canada

BACKGROUND

- There has been extensive research into the effects of safety culture on patient safety internationally, but findings have been inconsistent (Lee et al., 2019).
- Limited attention has been given to how nurses of different nationalities or cultural backgrounds may view safety culture and patient outcomes.
- In Saudi Arabia, expatriate nurses form the majority of the nursing force.
- Although expatriate status has been studied in relation to nurse retention in Saudi Arabia (e.g., Albougami et al., 2020), we hypothesized that it may also be associated with perceptions of patient safety culture, quality of care, and patient safety outcomes.

STUDY PURPOSE

This study examined the relationships between patient safety culture and two outcome variables (i.e., quality of care and patient safety) as perceived by expatriate nurses in Saudi Arabia after controlling for the nurses' work environment and nurse characteristics including nationality.

METHODS

Design: Correlational study with cross-sectional data.

Setting: A multi-specialty hospital in Riyadh, Saudi Arabia.

Sample: A convenience sample of 482 direct care nurses who had a minimum of one year of nursing experience at the hospital.
- 97% of the respondents in the larger study (Alharbi et al., 2020) reported that they had been educated in India or Pakistan (36.9%, n=178) or the Philippines (63.1%, n=304), and self-identified as non-Saudi; therefore, this study focused on these two groups of expatriate nurses.

Measures and Data Collection: Participants completed an online self-reported survey that assessed the following key variables:

- **Perceptions of safety culture:** 7 items from the AHRQ Hospital Survey on Patient Safety Culture, answered on 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A total mean score was calculated.
- **Perceptions of Quality of care** and **Patient safety:** each were measured with a single item, answered on 6-point Likert scale ranging from 1 (very poor) to 6 (excellent). Binary variables were created with 1 = very good or excellent, 0 = less than very good.
- **Nurses' work environment**, a control variable, was measured with the overall mean score of the PES-NWI (Lake, 2002).
- **Nationality:** Participants were asked about expatriate status and country where they had received their basic nursing education. Country where basic nursing education was received was used as a proxy for nationality of nurses who self-identified as expatriate.

Data Analysis: Chi-square and t-tests were used to assess mean differences in key study variables by nationality. Hierarchical logistic regression was conducted to examine the relationships between nationality, safety culture, and quality of care and patient safety, after controlling for other nurse characteristics and the nurses' work environment.

KEY FINDINGS

- T test results showed that nurses from India/Pakistan had more years of experience in the hospital (M = 14.3 vs 8.6) and on their current unit (M = 8.4 vs 3.9) than nurses from the Philippines.
- However, Chi-square results showed that nurses from India/Pakistan were less likely to have a nursing degree than nurses from the Philippines (16.0% vs 99.7%).
- T-test results showed that nurses from India/Pakistan rated patient safety culture (M = 3.9 vs 3.7) and nurses' work environment (M = 3.2 vs 2.9) more highly than nurses from the Philippines.
- Chi square results showed that nurses from India/Pakistan were more likely to rate quality of care (86.9% vs 66.3%) and patient safety (86.4% vs 72.5%) as very good or excellent than nurses from the Philippines.
- Logistic regression results showed that nationality (OR = 4.99) and patient safety culture (OR = 2.27) predicted quality of care as very good/excellent even after accounting for the nurses' work environment (OR = 2.06) and other nurse demographic characteristics. However, only patient safety culture (OR = 2.42) and nurses' work environment (OR = 2.29) predicted patient safety after accounting for other predictors. *See Table 1.*

Table 1. Results of Hierarchical Logistic Regression Analyses for Quality of Care and Patient Safety

	Quality of Care	Patient Safety
Predictor Variables	*OR*	*OR*
Gender	1.60	1.19
Years of nursing experience	1.02	1.01
Nationality (India/Pakistan vs Philippines)	**4.99***	2.38
Education degree	2.63	1.66
Nurses' work environment [*PES-NWI*]	**2.06****	**2.29****
Patient safety culture	**2.27*****	**2.42*****
Nagelkerke *R2*	19.4%	17.0%
Correct classification	75.6%	78.5%

Note. Quality of care 0 = Very poor to good, 1 = Very good or excellent; Patient safety 0 = Very poor to good, 1 = Very good or excellent; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

CONCLUSION

- Nurses' perceptions of safety culture, nurses' work environment, quality of care, and patient safety varied by the country where expatriate nurses in Saudi Arabia received their basic nursing education.
- Consistent with other research findings, perceptions of safety culture were highly predictive of perceived quality of care and patient safety.
- **What this research adds:** calls attention to the importance of accounting for nationality and/or cultural backgrounds when investigating relationships between patient safety culture and quality of care and patient safety.
- **Has implications for nurse leaders in practice:** when developing educational or other interventions to foster patient safety culture, quality of care and patient safety.

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