NURSING PRACTICE ENVIRONMENTS AND PATIENT SAFETY CULTURES IN CRITICAL ACCESS VERSUS NON-CRITICAL ACCESS HOSPITALS

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Aim: This study aimed to determine if there were differences in nurses’ perceptions of their practice environments (PE) and patient safety cultures (PSC), comparing nurses working in Critical Access hospitals (CAH) to those working in rural non-CAH.

Background: Developing a culture of safety is a key element in the improvement of quality of care (QOC) within healthcare organizations. Aspects of the PE and PSC affect the QOC delivered by nurses. Most studies involving QOC have focused on large urban hospitals or differences between urban and rural hospitals collectively. There are approximately 2100 rural hospitals in the United States with about 1300 of these designated as CAH. CAH must have 24-hour emergency care services available, a maximum of 25 acute care and swing beds, and maintain an average annual length of stay of 96 hours or less per patient for acute care. There is limited empirical evidence to which extent characteristics of CAH may influence nurses’ perceptions of their PE and PSC and differentiate CAH nurses from non-CAH rural counterparts.

Method: The research design was a cross-sectional study involving 24 rural hospitals (14 CAH), which border three mid-western states. The sample included nurses employed in CAH (n= 142) and non-CAH (n=349). Baseline data were collected prior to the implementation of a rural-based nurse residency program. Variables measured included nurses’ perception of PE and PSC. Data were collected via electronic and paper surveys, using the PE Scale of the Nursing Work Index (PES-NWI) and the AHRQ hospital Survey on PSC (HSOPS). The PES-NWI is scored on a 4-point scale (strongly agree-strongly disagree) and is comprised of five subscales: nurse participation in hospital affairs, nursing foundations for quality of care, manager ability and support of nurses, staffing, and nursing foundations for quality of care, manager ability and support of nurses, staffing, and nurse-physician relationships. The HSOPS is comprised of 10 PSC dimensions, scored on a 5-point scale: supervisor/manager expectations/actions supporting safety, organizational learning/continuous improvement, teamwork within units, communication openness, feedback about error, non-punitive response to errors, staffing, management support for patient safety, teamwork across units, handoffs and transition. Four outcome variables of the HSOPS were also measured, including overall perceptions of patient safety, frequency of events reporting, patient safety grade, and number of events reported. A mean score for each of the dimensions was calculated on the level of the individual respondent. Continuous data were analyzed with independent t-test or the Mann-Whitney U test if assumptions for the t-tests were not met. The significance level for analysis was set at 0.01 to control for type I error due to multiple testing.

Results: Significant differences emerged in the nurses’ perceptions of PE and PSC. Nurses in CAH had significantly higher scores (p<.01) on every dimension and overall composite score of the PES-NWI. Related to the HSOPS, scores of nurses in CAH were statistically different on only 2 of the 10 dimensions; however, CAH nurses had a higher composite score (p<.01).

Implications for rural health practices: This study was self-selected from hospitals that were interested in quality improvement. Nonetheless, findings from this study directly link the structural characteristics that designate hospitals as CAH to positive nurses’ perceptions of PE and PSC. CAH are smaller, more remote, and have fewer nurses, causing them to rely more heavily on teamwork, which is an important element contributing to positive perceptions of the PE and PSC. This study demonstrates that despite characteristics of CAH that can limit resources, CAH nurses’ perceptions of their work environment and cultures of safety are better than non-rural
CAH, suggesting that the QOC may also be better. Future research is needed to explore this relationship. Data collected for this study was supported by HRSA Grant (D11HP22196-01-00).