Effects of Stress on Critical Care Nurses: A National Cross-Sectional Study

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Abstract

Background: Health care is a demanding field, with a high level of responsibility and exposure to emotional and physical danger. High levels of stress may result in depression, anxiety, burnout syndrome, and in extreme cases, post-traumatic stress disorder. The aim of this study was to determine which personal, professional, and organizational variables are associated with greater perceived stress among critical care nurses for purposes of developing integrative solutions to decrease stress in the future. **Methods:** We conducted a correlation research survey using a cross-sectional design and an in-person survey method. The questionnaire consisted of 2 parts: (1) socioeconomic, professional, and institutional variables and (2) work stressors. Surveys were conducted between January 1, 2011, and December 1, 2015. Multistage cluster random sampling was utilized for data collection. Inclusion criteria were (1) age ≥18 years, (2) registered nurse, (3) works in the intensive care unit (ICU), and (4) willing and able to complete the survey. **Results:** We surveyed 21 767 ICU nurses in Iran and found that male sex, lower levels of peer collaboration, working with a supervisor in the unit, nurse–patient ratios, and working in a surgical ICU were positively associated with greater stress levels. Increasing age and married status were negatively associated with stress. Intensive care unit type (semi-closed vs open), ICU bed number, shift time, working on holidays, education level, and demographic factors including body mass index, and number of children were not significantly associated with stress levels. **Conclusion:** As the largest study of its kind, these findings support those found in various European, North, and South American studies. Efforts to decrease workplace stress of ICU nurses by focusing on facilitating peer collaboration, improving resource availability, and staffing ratios are likely to show the greatest impact on stress levels.

Background

The nursing profession is among the largest workforce in most industrialized countries.[1] Globally, we are experiencing a worsening nursing shortage. Based on 2014 census data, Iran (population 75 million) requires a nursing labor force of approximately 240 000; however, currently it has only 100 000 nurses.[2] As more nurses exit the profession, the individual workload of remaining nurse's increases, patient safety is jeopardized, job satisfaction decreases, and employer costs increase to replace those nurses.[2]

Not all drivers of the global shortage can be mitigated. As in most industrialized nations, the elderly population is among Iran's fastest growing populations.[2,3] Communicable and chronic diseases are an increasing burden.[3] Other factors include underinvestment in human resources (HRs), inadequate HR planning and management, migration, and high attrition. Attrition occurs due to poor work environments, low satisfaction, inadequate salary, and high stress.[1,2] Stress has a negative

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