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Clinical decision-making among new graduate nurses attending residency programs in Saudi Arabia

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ABSTRACT

Purpose: This study examined the impact of residency programs on clinical decision-making of new Saudi graduate nurses who completed a residency program compared to new Saudi graduate nurses who did not participate in residency programs.

Design: This descriptive study employed a convenience sample ($N = 98$) of new graduate nurses from three hospitals in Saudi Arabia. A self-administered questionnaire was used to collect data. Clinical decision-making skills were measured using the Clinical Decision Making in Nursing Scale.

Methods: Descriptive statistics, independent t-tests, and multiple linear regression analysis were utilized to examine the effect of residency programs on new graduate nurses' clinical decision-making skills.

Findings: On average, resident nurses had significantly higher levels of clinical decision-making skills than non-residents ($t = 23.25$, $p = 0.000$). Enrollment in a residency program explained 86.9% of the variance in total clinical decision making controlling for age and overall grade point average.

Conclusions: The findings of this study support evidence in the nursing literature conducted primarily in the US and Europe that residency programs have a positive influence on new graduate nurses' clinical decision-making skills.

Clinical relevance: This is the first study to examine the impact of residency programs on clinical decision-making among new Saudi graduate nurses who completed a residency program. The findings of this study underscore the need for the development and implementation of residency programs for all new nurses.

1. Introduction

Nurses' clinical decision-making skill development is vital in providing safe patient care (Lunney, 2009). Studies, however, have shown that new graduates struggle to transfer knowledge and theory to practice (Clarke & Aiken, 2003; del Bueno, 2005), and lack effective clinical decision-making skills (Ulrich et al., 2010). Further, research evidence shows that new graduate nurses make numerous errors when faced with clinical decision making in the first years of their nursing career (Saintsing, Gibson, & Pennington, 2011). It is known that the first 3 months of nursing practice for new graduate nurses is the most stressful time (Bowles & Candela, 2005; Halfer & Graf, 2006). At this point, the new graduate nurses will require a significant amount of support and preceptorship to assure that they become more confident in their knowledge, and decision-making skills. Residency programs play a significant role in this transition process (AL-Dossary, Kitsantas, & Maddox, 2014).

Research evidence from the US and European countries indicates that nurse residency programs are beneficial and have positive effects on new graduate nurses skills (Goode, Lynne, Krsek, & Bednash, 2009; Institute of Medicine, 2011; National Council of State Boards of Nursing, 2009; Olson-Sitki, Wendler, & Forbes, 2012; Robert Wood Johnson Foundation, 2011; Ulrich et al., 2010; University HealthSystem Consortium & American Association of Colleges of Nursing, 2007). Specifically, nurse residency programs are known to improve new graduate core competencies, skills, and increase nurses' self-confidence (Blanzola, Lindeman, & King, 2004). Further, residency programs offer new graduate nurses guidance and support to cope with the stressors in the first year of practice (Fink, Krugman, Casey, & Goode, 2008; Symes et al., 2005). Nurse residency programs also increase and improve new graduate nurses retention (Newhouse, Hoffman, & Hairston, 2007; Pine & Tart, 2007; Salt, Cummings, & Profetto-McGrath, 2008). Several studies have shown that residence programs not only eased the transition for the new graduate nurse to a professional nursing role, but most importantly significantly improved their decision making skills (Bratt, 2009; Bratt & Felzer, 2011). However, there is no objective evidence to support whether such findings are generalizable to countries such as Saudi Arabia.

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The profession of nursing in Saudi Arabia has advanced in many areas such as education, manpower, and practice. Saudi Arabia, however, is challenged by a nursing shortage as are many other countries. The severe shortage of Saudi nurses is accompanied by high turnover rates. In fact, most of the nurses are expatriates, as nurses come from over 40 different countries, including the United Kingdom, Ireland, and the US (AL-Dossary, Vail, & Macfarlane, 2012; Aldossary, While, & Barriball, 2008, Almalki, FitzGerald, & Clark, 2011).

To our knowledge, no studies have been conducted to examine how residency programs may influence new graduate nurses' decision-making skills in Saudi Arabia. Therefore, the purpose of this descriptive study was to examine the impact of residency programs on clinical decision-making of new Saudi graduate nurses who have completed a residency program compared to new Saudi graduate nurses who did not participate in residency programs.

2. Methods

2.1. Sample

In this study, a convenience sample of 98 Saudi new graduate nurses was utilized. The setting was multisite as the participants were recruited from three different hospitals in Saudi Arabia. The inclusion criteria for the new graduate nurses regardless of their participation in a residency program were as follows: the participants must have been Saudi citizens, graduated from a Saudi university, and were able to read and write in English.

The nurse residency programs considered in this study provided postgraduate training to new graduates that was designed to support development in nursing practice proficiency among recently graduated nursing students. These programs are designed to assist the Saudi nurse transition from academia to practice, and it ranges from 6 to 12-months. The goal of residency programs in both hospitals was focused on developing residents' leadership abilities, patient outcomes, and the nursing professional role. The residency programs (A and B) incorporate hospital orientation, department orientation, and add content and activities that facilitate the acquisition of skills needed for the role of the professional nurse in addition to the technical and clinical skills.

The residency programs in the study utilized a 2-week orientation that included an overview of the nursing mission, vision policy, rules and regulations of the hospital, intravenous therapy education and practice, infection control, hospital computer systems and programs, as well as basic life support courses.

In addition, supplemental classes were offered in both residency programs, including didactic direct instructions that promoted the new graduate nurse's critical thinking skills, clinical decision making, leadership skills, and the ability to use outcome data to promote patient safety. In both hospitals, a preceptor was assigned for each resident to guide their learning and provide clinical instruction on the job by example. These preceptors were focused on professional growth needs of the new graduate nurse throughout the length of the residency program.

There were minimal differences between the two residency programs (A and B) such as the length of the orientation period. It varied based on the unit and/or specialty the residents were joining. Further, the new graduate nurse residents were expected to remain full-time on one unit for the entire year of the program in the nurse residency program A, however, in the nurse residency program B the new graduate nurse rotated in various units within the same specialty. In addition, the nurse residency programs were different in terms of their flexibility of when residents can join the program. The nurse residency program A started three times per year and the nurse residency program B only started once per calendar year.

The same inclusion criteria were applied to the non-residents who had worked for 1 year in a hospital that did not have a residency program. The non-resident maintained his/her usual work habits and did not participate in the residency programs. He/she only received the traditional 2-week hospital orientation that included introduction to policy, guidelines, rules and regulations of the hospital, intravenous therapy education and practice, infection control, hospital computer systems and programs, and a basic life support course. The non-residents had access to a head nurse who worked in the same unit. The head nurse supervised the administrative and clinical aspects of nursing care and served as a learning resource.

2.2. Instrument

The Clinical Decision-Making in Nursing Scale (CDMNS) (Jenkins, 1985) was used to measure clinical decision-making skills in both residents and non-residents; the tool was adopted with permission. The CDMNS is composed of four domains: search for alternatives or options, canvassing of objectives and values, evaluation and reevaluation of consequences, and search for information and unbiased assimilation of new information. Each domain is composed of ten items.

This instrument uses a five-point Likert scale ranging from five (always) to one (never) for the nurses or nursing students to reflect upon their perceptions of their own behavior while caring for patients. Of the 40 items on the CDNMS, 22 are worded positively and 18 are worded negatively. The CDNMS instrument provides an overall score for each of the four subscales scores, which are composed of ten items each, and the possible scores range from 10 to 50 for each subscale. The CDNMS instrument also provides one overall score for total clinical decision making. The possible scores range from 40 to 200.

The CDMNS has an established reliability with a Cronbach's alpha of 0.83 (Waltz & Jenkins, 2001), which indicates a good reliability. The CDMNS instrument in this study had a Cronbach's alpha of 0.97 ($n = 98$), with subscales ranging from 0.84 to 0.92. This indicates a good reliability for the CDMNS instrument and its subscales.

2.3. Procedures

Approval for this study was received from the Human Studies Review Board of Gorge Mason University and the three participating hospitals in Saudi Arabia. All participants were informed of the study purpose and were given the option not to participate. Those who agreed to participate signed a written consent. Confidentiality is considered primary to this study, and no personal identification was requested. A face-to-face recruitment method was utilized to recruit participants at Saudi Arabian hospitals. The researcher collected data by using a paper and pencil survey administration format for both groups.

A pilot study was conducted to determine the level of understanding, any language or phrase difficulties, comprehension, and length of time to complete the questionnaire by potential participants. In addition, the pilot study was performed to assess the feasibility of using the instrument in Saudi Arabian health care settings. The pilot group ($n = 25$) had similar features to those of the study sample of 98 nurses.

2.4. Measures

Demographic data such as age, marital status, nursing programs that the new Saudi nurse graduated from, and overall grade point average (GPA) were collected. Marital status consisted of two categories namely, unmarried and married. The unmarried category consisted of divorced and single nurses since only a few participants stated that they were divorced. The inclusion of marital status in describing this sample is based on previous studies that have shown a positive association between being married and exhibiting higher clinical decision making skills (Siew Eng, Mohamad, Ismail, & Zain, 2011). Age was treated as a continuous variable and categorical. Based on the age distribution, participants were classified into ≤25 and >25 years old. Overall GPA was also recoded into a categorical variable with two categories (≤3.00, >3.00). This cutoff point was chosen because to join any residency program in Saudi Arabia the potential residents must have a minimum