The Relationship between Nurse - Patient Ratio, Nursing Care Organization systems and the Hospital Ward Organizational Environment

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By

Yaldez Khairy Zakaria

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العلاقة بين نسبة الممرضات للمرضى وطرق تنظيم الرعاية التمريضية و البيئة التنظيمية لأقسام المستشفى

رسالة علمية

مقدمة الى كلية التمريض – جامعة الاسكندرية
استيفاء للدراسات المقررة للحصول على درجة

الدكتوراه في علوم التمريض

في

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LIST OF CONTENTS

LIST OF TABLES

I.INTRODUCTION

Nurses represent the primary caring system in hospitals 24 hrs a day. An adequate caring system provides enough nurses to observe patients directly so that they can recognize an impending or actual problem. These nurses are the first to mobilize an intervention that often requires the coordination of the activities of others including physicians, to save a patient's life.[1] In spite of that, health care facilities have the potential to achieve large financial savings by reducing the number of nurses they employ. However, this may have negative consequences for staff, patient and the organization as a whole.[2,3]

In hospitals, as well as in other health care settings, staffing is one of the most pressing challenges nurse managers face.[4] The importance of viewing personnel as an expandable resource, addressed in an organization's strategic plan, is crucial to meet challenges faced in a rapidly changing health care environment.[5] The current health care environment is limited in options for dealing with nurse staffing issues.[6] As well as, the changes in the structure and composition of the nursing workforce as a result of hospital downsizing and restructuring in the 1990s have prompted concern in the nursing community regarding the quality of the nursing work environment.[7,8]

Health care management research emphasizes understanding "The bigger pictures" with regard to staffing issues as example recruitment, retention and workforce planning.[9,10] The American Nurses Association (ANA) has promoted the adoption of legislation that mandates hospitals to develop and implement nurse staffing plans.[11] Also, various ratios have been recommended in the literature and through law and policy makers, there continues to be a lack of empirical evidence to support these recommendations, also no one has defined a method to establish "adequate" staffing, how to continuously provide it and what the appropriate staffing characteristics (ratios, skill mix, etc…) are.[12,13]

It's widely clear that when describing nurse staffing, the concept of a one-size fits all is not appropriate and many factors need to be considered including for example, factors related to the nursing units where care is delivered characteristics of staff providing the care (including the autonomous role and decision making role that the directed care the nurse assumes pertaining to staffing and workload decisions) and factors related to the organization.[14,15]

A growing concern by the adequacy on nurse staffing has led to an increased emphasis on research exploring the relationship between the staffing levels and patient outcomes.[10,13,16-22] Also, between the staffing levels and nurses' outcomes including job satisfaction, job pressure, job threat burnout, work place injury and role tension.[16,20,22-27] These researches were able to determine that there is a link between nurse staffing levels and the well-being of nurses.[20,26]

Aiken et al (2002) studied the impact of nurse staffing levels on factors that influence nurse retention. They found that a more favorable nurse to patient ratios are associated with lower burnout and higher job satisfaction among registered nurse.[16]

Although these findings, it is difficult to generalize because nurse staffing levels depend on factors that can vary, including characteristics of the nurse and the patient and the work environment.[14,15,22] Curtin (2003) assured that ratios must be modified by the nurses' level of experience, the organizations' characteristics and the quality of interaction between the staff.[13] Also, Aiken et al (2002) found that structural factors in hospitals, such as hospital and ward size, nurse staffing levels and the organization of work are thought to impact directly on patient outcomes.[16] Suhonen et al (2007) found that the hospital characteristics, nurse staffing and care delivery model affect patient outcomes.[28] Considering all these variables, the ward as a physical, social and organizational unit probably remains the most significant unit of analysis.[15]

In addition to previously mentioned researches, in relation to nurses' staffing levels and its relationship with patient and nurses' outcomes. There are extensive researches that study the types of nursing care organization in the hospitals' wards.[24,29-42] Other studies were developed to identify the organizational features either at the hospital level or at the ward level.[15,24,43-47] Less attention has been paid to factors in the nursing work environment which may have direct effect on nurses' outcomes and consequently, influence patients' outcomes. These factors can be explored by examining the quality of work environment (e.g. the configuration of care delivery models, the quality of the coordination of care among the staff) in relation to outcomes experienced by the nurse. Nurses' outcomes have been associated with changes to nurse staffing, care delivery models and the quality of nursing work environments.[7] Although the number of studies developed, there has been a lack of synthesis in nursing literature about the combined effects of number of staff and organizational systems in relation to the effectiveness at ward level. It remains important to examine the more immediate work unit –the ward- and that interactions between staffing, work organization and work environment at this level are important for care provision and outcomes.[9]

At the national level, studies developed discovered many variables independently. In relation to nurse staffing, Nassar (1978) studied models for staffing various in patient units at Alexandria Main University Hospital.[48] Regarding the methods of organizing nursing care, a study developed to assess the impact of two different methods of nursing assignment and its relation to the quality of nursing care.[49] Considering the work environment, Bassiouni (1988) studied the nurses' perceptions toward variable related to work environment.[50] Abdel Aziz (1990) studied the relationship between time scheduling patterns and nurses' job satisfaction.[51] El Sebaey (1996) examined the relationship between nurses' perception for decision making and propensity to leave.[52] Abdou (2001) studied the nurses' burnout and their coping strategies.[53]
In addition to, Dawood (2001) who conducted a research to identify predictors for nurses' turnover in private and governmental hospitals.[54]

There has been a lack of synthesis in nursing literature about the combined effects of number of staff and organizational systems in relation to effectiveness at ward level.[9] In previous work, the impact of staffing resources and systems of ward nursing organization on care processes and outcomes have been considered separately.[29,30] Yet, it remains important to examine the interactions between staffing, work organization and work environment at the ward level; because these interactions are important for care provision and outcomes.[9]

Thus, the current study aims to examine the relationships between nurses' number represented as nurse to patient ratio, nursing care organization systems and nurses' perceptions of their environment. Findings from such a study will deal with the impact of numbers of staff on perceptions about standards of professional practice, working relationships, nurses' influence within the ward and their job satisfaction.

II. REVIEW OF LITERATURE

If management means to get work done through others, a primary managerial function is to staff, or assemble and ready those "others" who perform agency work. Each divisional nursing director and head nurse is responsible for developing an appropriate staffing plan for the nursing division or unit.[5,55] Staffing is the process of balancing the quantity of staff available with the quantity and mix of staff needed by the organization.[4] It also means assembling and readying the employees needed to fulfill the agency's mission.[5,55]

Lack of appropriate staff is a key stumbling block to the provision of effective nursing care.[1] When developing a staffing plan, many variables should be taken into consideration, including needs and numbers of the patient, acuity of patients, patient satisfaction, the care setting and its environment, competency and skill mix of the nursing staff, and availability of medical and support staff.[14,56]

Nursing Shortage:

Worldwide, healthcare settings face difficulties in recruitment and retention of nursing staff. This problem has two origins: the nursing shortage, and staff turnover.[57] Nurses represent the largest group of healthcare professionals and the shortage of nursing personnel is having a direct impact on the health and work life of nurses and on patient safety.[58] Restructuring of the health system, increasing workloads, cut-backs in staffing, financial pressures and increased demand for health services further exacerbate the effects of nursing human resources shortages.[14,58] Also, nursing staff turnover is costly and it is one of the major issues facing any health care delivery system.[59]

The nursing shortage is a global phenomenon that is impacting health systems in most developed countries. In Victoria, Australia, several periods of nursing shortage over the last 40 years, with most lasting only a year or two.[14] In the late 1980s, the public at large as well as clinicians and administrators grew concerned about what many calls a crisis in hospital care. Newspaper stories, and governmental, private and multidisciplinary professional groups devoted attention to the increasing burden of care on nurses in short-staffed hospitals.[15,60] By the late 1990s, severe nursing shortages emerged, nurse management responded through further usage of often inexperienced agency nurses which placed even greater pressure on the remaining permanent nurses.[58]

In 1999, additional time worked by nurses in the form of unpaid overtime and working through meal breaks. Work intensification led to incredible levels of stress amongst nurses. As a result, nurses suffered a serious decline in their ability to take pride from delivering high quality care to patients, leading many nurses to leave the profession "broken spirited and broken hearted".[58] Between 2001 and 2003, there were the worst years of the nursing shortage and a time of poor job.[60]A major reason for nurses' turnover and shortage is the perception of a lack of professional respect and recognition by hospital administrators, doctors and the broader community.[59] Also, difficulty in implementing change, lack of influence or autonomy and instrumental communication have been identified as predictors of nurse turnover.[44,46,61,62]

The current nursing shortage is occurring in an era of renewed concerns about quality of care. This offers unique opportunities for developing management, workforce and professional development policies to remedy problems with staffing and other longstanding workplace environment issues in hospital nursing.[63]

Different Staffing Methodologies:

To solve the shortage problems in Ireland, the situation is being mitigated by the introduction of large number of nurses from abroad, increased number of preregistration training places for nursing students, enhanced pay for specialist nurses and additional support for continuing education.[63,64] A great deal of time, effort and resources have been invested in developing and refining methods of estimating the right number of nurses.[65] In 1973, Aydelotte developed a review and critique for nurse staffing methodology, the author described the methodology to fall into four major classes which are descriptive, industrial engineering, managerial engineering, and operations research.[66]

<u>The descriptive method:</u>

This methodology makes use of a number of data gathering devices about a large number of variables. The final decision about amount of staff resides in the subjective judgments of individuals who have had a background to experiences. The approach may use simple ratios, formulas, and suggested proportions between types of personnel.[66] In the early days, these calculations were made on the basis of such statistical information as bed use, and lengths of stay, and took no account of local differences in workload or of variations in local practices which might affect workload.[65,67,68]

One example of the descriptive method is the simple steps that are entitled staffing by nursing care hours per patient day. That is each supervisor estimates the number of nursing personnel she believes necessary to do an adequate job at a specific census. Nursing hours per patient day are calculated and a daily basic staffing agreed upon. Staff is added or removed depending upon nursing care hours per day available.[66]