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Review Article

Relationship between nursing care quality, nurse staffing, nurse job satisfaction, nurse practice environment, and burnout: literature review

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ABSTRACT

The purpose of this literature review is to explore the relationship between nurse staffing, nurse job satisfaction, nurse practice environment, burnout, and nursing care quality through a consideration of what is meant by perceptions of nursing care quality. Different people define nursing care quality in many ways. It is complex, multi-faceted and multi-dimensional, and attempts to assess, monitor, evaluate and improve nursing care quality have evolved over a number of years. Of particular interest is the way in which changes in nurse staffing, nurse job satisfaction, nurse practice environment, and burnout may affect the quality of nursing care delivery. A search was conducted using the CINAHL, Medline and Embase databases, HINARI, Science Direct, Google, and PubMed. The terms searched included quality of health care; nursing care quality; nurse job satisfaction; nurse practice environment; burnout; and nurse staffing. Papers were included for their relevance to the field of enquiry. The original search was conducted in 2003 and updated in 2004. Quality of care is a complex, multi-dimensional concept, which presents researchers with a challenge when attempting to evaluate it. Many different tools have assessed nursing care quality. In addition, the review found that there were relationships between nurse staffing, nurse job satisfaction, nurse practice environment, burnout, and nursing care quality.

Keywords: Nursing care quality, Literature review, Nurse staffing, Nurse job satisfaction, Nurse practice environment, Burnout

INTRODUCTION

The central question explored in this literature review is whether there is a relationship between perceptions of the nursing care quality and differences in nurse staffing, nurse job satisfaction, nurse practice environment, and burnout. Three basic ideas underpin this question: first, the growing focus on quality improvement in health care; second, the concerns being expressed about the nursing care quality; and, third, the impetus towards patient and public involvement and consultation in healthcare.

Since 1994, the Ministry of Health (MoH) of Cambodia has been committed to reorganizing the health system, placing an emphasis on the district.[1] The reform of the health system is part of the larger national Public Administrative Reform (PAR). The PAR demonstrates the willingness to rehabilitate and improve pubic sector effectiveness and efficiency. The MoH's main objective for the health system reform is "to improve and extend primary health care through the implementation of a district based health system".[1]

Further, there is also a wide range of literature drawing attention to the outcomes of care. Of particular interest is the way in which changes in nurse staffing, nurse job satisfaction, nurse practice environment and burnout are said to affect the nursing care quality. Commentators have argued that the nursing care quality is directly linked to nurse staffing, nurse practice environment on

quality of care, impact of nurse practice environment and nurse staffing on job dissatisfaction, high emotional exhaustion, and fair or poor quality of care, and nurse burnout was found to be associated with nurse staffing levels. [2-6] A study found that the total score for nurses' job satisfaction was correlated with the total score of quality of nursing care.[7]

Research from the United States of America (USA) has suggested that leaner nurse staffing is linked to increased length of hospital stay, hospital-acquired infections, and the prevalence of pressure ulcers.[8] Researchers have also concluded that greater numbers of patient deaths are associated with fewer nurses being available to provide care.[8]

This literature review was undertaken as preparation for a research project that seeks to develop data collection tools for use at the ward level to explore whether nurses' perceptions of nursing care quality is affected by differences in selected organizational variables. The key issues considered in the review are what is meant by nursing care quality and what is known about the selected correlational variables, which were chosen as a focus for the next research project.

BACKGROUND

Many different people define nursing care quality in many ways. It is complex, multi-faceted and multi-dimensional, and attempts to assess, monitor, evaluate and improve nursing care quality have evolved over a number of years. In health care the pursuit of nursing care quality has been driven by concerns over its costs, as well as a move towards continuous quality improvement.

For instance, the most important classical theoretical models have been used such as Donabedian's Quality of Care, Quality Health Outcomes Model, and Process of Care and Outcomes Model. The theoretical models that have been used to explain these phenomena of interest are discussed next.

First is Donabedian

Donabedian, who is a well known researcher in the area of quality of care, maintains that the essence of quality involves the balance between benefit and harm. He found that the aspects of structure, outcome and process are indicators of the quality of medical care. 'Structure' was described as the fixed part of the practice setting and consists of providers, resources and tools. 'Process' is the relationship between care activities and the consequences of them on the health and welfare of the patient. 'Outcomes' are interpreted as changes in the patient's condition that result from the processes of care.[9] He wanted to turn the assessment process from evaluation to understanding, i.e. from "What is wrong here?" to "What goes on here?" He claimed that the quality of care is as good as patients' expression of satisfaction with the care received. Satisfaction is not simply a measure of quality, but the goal of health care delivery.[9,10]

Second is Quality Health Outcomes Model,[11]

In 1998, expert Panel on Quality Health Care of the American Academy of Nursing published the Quality Health Outcomes Model as a framework for implementing quality outcomes research, most specifically as a means to test relationships among the elements of structure, process, and outcomes. QHOD is targeted at the reciprocal interactions among four constructs: 1) system characteristic, 2) intervention, 3) client characteristic, and 4) outcome. A literature review shows that the QHOM is useful to theoretically guide studies that evaluate system interventions such as nurse staffing, improved patient care, and outcomes.[12-17]

Third is Process of Care Outcome Model

The PCOM posits a temporal relationship among the care environment, patient factors, the process of care and outcomes. The traditional structural characteristics of the nursing and hospital organization are built-in the care environment. The care environment and patient factors have a direct relationship on outcomes. In contrast to Donabedian's view that interventions directly produce expected outcomes, the PCOM suggests that the effect of an intervention is mediated by system and client characteristics, but is thought to have no independent direct effect.

Nursing care quality has been defined along a number of different dimensions, for example, that study identified it as a characteristic or attribute of excellence within the context of degree of merit desired and valued in society.[18] He defined nursing care quality as 'process' revealed the complexity of nurses' perceptions of nursing care quality as nurses cited teamwork, multi-disciplinary process, and 'being competent' as the most important elements of this category.[19] Another category is 'outcome' patient satisfaction, meeting patient needs and giving information. Other authors referred nursing care quality as empathy, dedication, cheerfulness, tact, commitment, confidence, sincerity, humility, subtlety and compassion.[20]

In recent years, nursing care quality were generated and grouped into four domains: competence, caring, professionalism, and demeanor.[21] A study reported that the six lived meanings of quality nursing care found: 1) Advocacy, 2) Caring, 3) Empathy, 4) Intentionality, 5) Respect, and 6) Responsibility.[22] A group of researchers reported that the quality paradigm emphasizes doing things right and explored the nursing care quality by examining necessary 'things' left undone by nurses by using a cross-sectional survey method.[23]

In recent years, there has been global interest in the recruitment and retention of qualified nurses and the impact that nurse shortages may have on the nursing care

quality delivered to patients.[5,24,3,13] In particular, over the last two decades nursing has seen its numbers decrease through a combination of fewer people entering the profession, a crisis in retention as a result of many qualified nurses leaving because of stress, nursing staffing level, nurse practice environment, burnout and job dissatisfaction, and an ageing nursing workforce.[25,26]

Aims of literature review

Given the complexity and multi-dimensionality described above, research exploring nursing care quality is methodologically difficult. There is a requirement to define nursing care quality clearly, to use appropriate research designs and to build on what is already known. In designing and planning our study, we undertook a literature review to inform the key issue we are attempting to address, whether differences in perceptions of nursing care quality are impacted by changes in nurse staffing, nurse job satisfaction, nurse practice environment, and burnout. This involved consideration of the following questions:

- How is nursing care quality evaluated?
- What does nursing care quality mean to clinical nurses?
- What is the relationship between nurse staffing and nursing care quality?
- What is the relationship between nurse job satisfaction and nursing care quality?
- What is the relationship between nurse practice environment and nursing care quality?
- What is the relationship between burnout and nursing care quality?

Identification of literature

A comprehensive search has been conducted in 2013, and updated in 2015 using the CINAHL, Medline and Embase databases, HINARI, Science Direct, Google, and PubMed. The key words used were quality of health care; nursing care quality; nurse; nurse job satisfaction; nurse practice environment; burnout; and nurse staffing. A broad approach to searching was undertaken to ensure that any potentially relevant papers were not missed. The search included articles written in English, and no limitations were placed on the date of publication. Where possible all key search terms were exploded and all subheadings were included. In addition, the reference lists of retrieved articles were also scrutinized.

The electronic search yielded a total of 1,336 citations. The inclusion criteria are all English articles. The search was used EndNote software retrieve from all the data coming from various regions. The resulting set of 45 citations and their abstracts was then reviewed manually to exclude any articles without a clear nursing focus. Furthermore, articles were included in the review based on certain inclusion criteria which included (a) a clear focus on nursing, (b) a description of the concept of nursing care quality (c) a clarification of the elements used by nurses and patients to interpret nursing care quality and finally (d) inpatient nursing care for adults (19-65+).

Findings

Evaluation of nursing care quality

In the UK, nursing care quality has often relied on established nursing quality assessment tools.[27] It was called Quality of Patient Care Scale (QualPaCs) and Monitor. This tool was developed first in the States in the early 1970s.[18] It was aimed at the process of nursing care delivered in acute medical and surgical wards, and was administered by trained nurse assessors. Nursing care quality was measured by nurses who gave their ward an overall grade on patient safety as poor, failing, acceptable, very good or excellent. Care left undone (termed 'missed care' in the analyses) was assessed by asking nurses to report 'on your most recent shift.[26-29]

Another study was modified on the basis of the "Good Nursing Care" classification developed.[30] This framework comprised six main categories (staff characteristics, nursing activities, preconditions, and progress of nursing process, environment, and empowerment strategies.[30]

A study developed a tool to measure the perceptions of professional hospital staff in the UK regarding the quality of care provided to patients.[31] Another author already developed an instrument in the US and this study aimed at exploring whether the validity of the tool could be transferred to the UK.[32] The results indicate that for professionals in clinical areas both in the UK and in the US, issues related to competency, communication, confidentiality and dignity of patients, cleanliness, and hygiene, expertise and judgment, safety, discharge procedures, information and education, staff morale and continuity of care are important when it comes to determine their perceptions of the quality of care.

Other researchers developed an instrument for measuring the nursing care quality needed for evaluation and improvement of nursing care.[33] The Karen-patient and the Karen-personnel based on Donabedian's Structure–Process–Outcome triad (S–P–O triad) had promising content validity, discriminative power and internal consistency.

Perceptions of clinical nurses on nursing care quality

A grounded theory study of the nurses' perceptions in relation to the delivery of nursing care quality was conducted where nurses described nursing care quality as 'meeting all the needs of the patients or clients you are looking after' whilst low quality nursing care was related to the omission of nursing care required to meet patients'

needs'.[34] According to the nurses, patients' needs were identified as physical or psychosocial. The physical needs were related to a lack of personal independence in the physical daily functional activities of the person. Psychosocial needs required the nurses to assume a supportive role for the patient. The nurses placed great emphasis on meeting patients' psychosocial needs and described the care of these needs in greater detail than care for physical needs.[34]

A study explored practicing nurses' perceptions of quality nursing care and revealed three categories described as 'structure', 'process' and 'outcome.'[19] The category of 'structure' emerged from substantive codes such as skill mix, time, and workload (human resources). "Nursing care quality is depended on having enough staff of the right skill mix, which in turn allows time to be spent with patients."[19] The author added that while the nature of quality in nursing is intricate, nurses have readily identified the infrastructure needed to support quality practices. The data analysis revealed three categories described as 'structure', 'process' and 'outcome'. The category of 'structure' emerged from substantive codes such as skill mix, time, workload (human resources). The 'process' revealed the complexity of nurses' perceptions of nursing care quality as teamwork, multi-disciplinary process, and 'being competent' as the most important elements of this category. Nurses' perceptions of nursing care quality were 'outcome', which nurses defined nursing care quality in terms of patient satisfaction, meeting patient needs and giving information.

Nurse staffing and nursing care quality

The study was to analyze hospital staff nurses' shift length, scheduling characteristics, and nurse reported safety and nursing care quality. More than 22,000 registered nurses' reports of shift length and scheduling characteristics were associated with higher odds of reporting poor nursing care quality and safety.[35] Nurses are well suited to report on quality due to their integral role in patient care and have been shown to be valid informants of hospital quality.[36] Other modifiable conditions of the nurses' work environment, such as nurses' workload, have been related to nurse assessed quality of care.[37]

Further, a systematic review provided the evidence-base for the relationship between nursing home nurse staffing (proportion of RNs and support workers) and how this affects nursing care quality home residents. They concluded that numbers of nurses fails to address the influence of other staffing factors (e.g. turnover, agency staff use), training and experience of staff, and care organization and management. They highlighted important methodological lessons for future international studies and make an important contribution to the evidence-base of a relationship between the nursing workforce and nursing care quality and resident outcomes in nursing home settings.[38]

Nurse job satisfaction and nursing care quality:

Job dissatisfaction and burnout are major contributory actors of intention to leave, absenteeism, turnover, and adverse outcomes in hospital care.[39,26] Previous studies have indicated that nurses in hospitals with supportive nurse practice environments and adequate nurse staffing are more satisfied in their jobs, experience less nurse burnout, and report better nursing care quality.[40,41,17]

A study conducted in Thailand reported that almost one out of four nurses were dissatisfied with their job and close to 40% of study nurses experienced high burnout. They affirmed the association between nurse job dissatisfaction and nurses' intent to leave and turnover. Nurses' intent to leave was also negatively associated with patient satisfaction.[6] They added that the impact of nurse practice environment and nurse staffing, both features of the organizational system in which nursing care is delivered, are shown to be associated with job dissatisfaction, high emotional exhaustion, and fair or poor nursing care quality. Our findings show that hospitals with favorable nurse practice environments and nurse staffing had lower likelihoods of having lower nurse-assessed nursing care quality. Also, nurses practicing in hospitals with a favorable nurse practice environment had lower burnout.

Other studies reported that nurse practice environment was positively correlated with nurse-assessed nursing care quality and negatively associated with burnout and nurses in hospitals with lower nursing staff were higher in reporting nursing care quality as fair or poor.[26,40,42,43,44,37]

Nurse practice environment and nursing care quality

A study provided the overall context for this discussion by illustrating the cyclic nature of cost and quality concerns and nurses' working conditions.[45] She characterizes nursing's current position in the cycle: cost concerns in the health care marketplace have precipitated the substitution of lower priced personnel for higher priced RNs and have led to unrealistic expectations for nurses. Researchers emphasized that the current position in working conditions is precisely the time when health care organizations should balance costs and nursing care quality. Maintaining and promoting good working conditions, those circumstances that promote RN satisfaction and quality care, retain RNs, and attract students into the profession.

A recently reported large study of 617 and 488 hospitals from the US and 12 European countries respectively confirmed the impact of nurse practice environment on quality of care.[5] There is increasing consensus among leaders and researchers that certain organizational

characteristics supporting sound nurse practice environments and nursing care quality can be replicated.[46,47]

Previous studies found that nurse practice environment dimensions (nurse–physician relations, nurse management at the unit level and hospital management) predicted nurse job dissatisfaction and nurse-assessed nursing care quality (at the unit, the last shift, and in the hospital) through burnout dimensions.[48,49] They found support for a more elaborate model that placed nurse-reported workload in a mediating position between nurse practice environment and dimensions of burnout as an extension of our earlier findings involving the prediction of job outcome and nurse-assessed nursing care quality in a sample of psychiatric care nurses.[48,49,50] A paper reported that the independent variables of nurse practice environment predicted the mediating variables of burnout dimensions, as well as job outcomes such as job satisfaction, intention to stay at the hospital, intention to stay in the nursing profession, and nurse-assessed nursing care quality at the unit, the last shift, and in the hospital.[25]

Burnout and nursing care quality

Two of investigators showed the impact of the areas of work-life (control, workload, reward, fairness, community and values) on nurse turnover intentions mediated through feelings of burnout in a Canadian study of 677 nurses.[51] Workload played an important mediating role between the extent of professional control of practice and emotional exhaustion. In addition, shared values in the workplace played a pivotal role between the other areas of work-life and feelings of depersonalization and personal accomplishment, in a manner suggestive of the importance of personal–organizational fit. Work overload is commonly reported by nurses and is among the frequently mentioned motivators for job turnover intention in nurses.[52,53] Significant associations between workload and burnout have been found in Canadian hospital staff.[54] Many researchers considered workload to be most directly related to the exhaustion component of the burnout phenomenon.[55] Moreover, prior studies have shown that high nurse burnout is associated with lower levels of patient satisfaction, nursing care quality.[56,17,57] Additionally, almost one out of four study nurses reported quality of care as fair or poor, suggesting that many patients may be at significant risk for preventable adverse outcomes.

CONCLUSION

In exploring the relationship between nurse staffing, nurse job satisfaction, nurse practice environment, burnout, and nursing care quality have been associated variables. This review affirms the importance of nurses' perceptions of care quality as an outcome variable to assess work environmental factors. The findings of this review are important for nurse researchers to explore ways in which we might begin to be more creative in ensuring that patients' perspectives on nursing care quality are given equal weight to the clinical nurses' voice in any assessment of quality in future nursing studies.

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