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Review Article

Nursing care quality: a concept analysis

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ABSTRACT

The purpose of this paper is to provide a clear definition of nursing care quality that contributes to the formulation, application, and measurement of quality nursing outcomes for patients, organisations, and nursing staff. It also indicates the manner in which, by using the definition, empirically based operational definitions can be developed for different operational environments and settings. The study employed a concept analysis methodology to extract terms, attributes, antecedents, and consequences (outcomes) from relevant literature databases. The analysis identified nine attributes: nurse competency performance, met nursing care needs, good experiences for patients, good leadership, staff characteristics, preconditions of care, physical environment, progress of nursing process, and cooperation with relatives. Antecedences include nurse-staffing levels, positive practice environment, and nursing turnover. Consequences include patient safety, patient satisfaction, nursing outcomes, nurse satisfaction, and budget management. Because of the breadth and depth of modern nursing practice, further research and development of the concept is required.

Keywords: Nursing care quality, Concept analysis, Nursing outcomes, Patient care

INTRODUCTION

Nursing care quality (NCQ) is desired by patients and promised by nurses. However, the complexity and ambiguity of the term, highlighted in the literature, prevents nurses moving from merely asserting the need for quality care to meeting proscribed standards of quality assurance that care provided is excellent (Charalambous, Papadopoulos & Beardsmoore, 2008).[1]

In 2004, the Institute of Medicine (IOM) heralded the need for improvement in patient safety and quality of care in the US with the publication of a milestone report.[2] Their analysis of hospital death rates showed that 98,000 deaths annually were due to errors by healthcare providers. This sent shockwaves through the profession and the public, and the IOM responded with a delineation of a vision for safe, high quality care that would be evidence-based and patient-centred and systems-oriented.[3] Two researchers also found that quality of nursing care makes a vital difference in patient outcomes and safety.[4]

However, despite the dissemination of numerous innovative patient safety and quality programs in recent years, the rate of improvement is disturbingly slow. Others found that there 'is consensus that the goal proposed by the IOM to halve the rate of medical errors within 5 years has not yet been achieved'.[5] As the American Nurses Association (ANA) affirms, as healthcare professionals, nurses are accountable for the quality and systematic improvement of nursing practice.[6]

Practicing nurses are often participants in studies measuring NCQ; however, evidence of their input into the development of measures is lacking. Furthermore, the developers and authors of standards and measures are often nurse leaders, managers, educators, and researchers who, by virtue of their position, are not in practicing

nurse care roles. Therefore, the meaning of NCQ for practicing nurses is not adequately represented.[4]

These findings strongly indicate that, although NCQ is a necessary requirement for consistently positive health outcomes, as both a concept and standard it lacks definition. For example, a study found that 'assessments of the quality of nursing are associated with both structural (workload) and process of care indicators (unfinished clinical care and patient safety problems), with the relationship strongest between process of care and quality'.[7] However, NCQ is complex multi-dimensional concept that exceeds incomplete clinical care and patient safety and includes, among other variables, nurse and patient perspectives, and family expectations.[8-16]

METHODS

Concept analysis is a formal, rigorous process by which an abstract concept is explored, clarified, validated, defined, and differentiated from similar concepts to inform theory development and enhance communication.[17]

The Concept Analysis Approach

Although there are several approaches, the method described eight steps.[17] These are (1) selection of a concept; (2) determination of the aim or purpose of the analysis; (3) identification of all uses of the concept that can be discovered; (4) determination of the defining attributes; (5) construction of a model case; (6) construction of additional cases; (7) identification of antecedents and consequences; and (8) definition of empirical referents. The results of this approach applied to NCQ are set out in Table 1 and Figure 1 below.

Table 1: Defining attributes of NCQ.

Categories	Measurement
Nurse competency & performance	• Understanding of knowledge • Clinical, technical, and communication skills • Ability to problem solve by use of clinical judgment
Met nursing care needs	• Develop or update nursing care plans • Comfort/talk with patients • Back rubs and skin care • Instruct patients and/or family • Adequately document nursing care • Oral hygiene • Prepare patients and families for discharge
Good experiences of care	• A holistic approach with continuous care • Compassion • Professional, evidence-based practice • Safe, effective and prompt nursing interventions
Good leadership	• Effective communication • Being empowered by nurses through information • Nurses addressing patients' religious and spiritual needs • A nursing environment that promotes shared decision-making • Effective teamwork with other professions • Interpersonal relationships
Staff characteristics	• Careful, flexible, friendly, reliable, polite, work as a team, and be neat and tidy in professional appearance
Preconditions for care	• Quality of nursing care can be achieved if competent nurses have up-to-date knowledge and practical skills, and enough time for patient care
Physical environment	• Patients often consider a clean, comfortable, safe, and calm ward as a component of NCQ
Progress of nursing process	• Short waiting time for receiving nursing interventions after the doctor's instructions; friendly ward reception, and being able to talk freely with nurses
Cooperation with relatives	Provide sufficient information about matters related to patient care (prognosis, process, results) together with encouragement and emotional support.

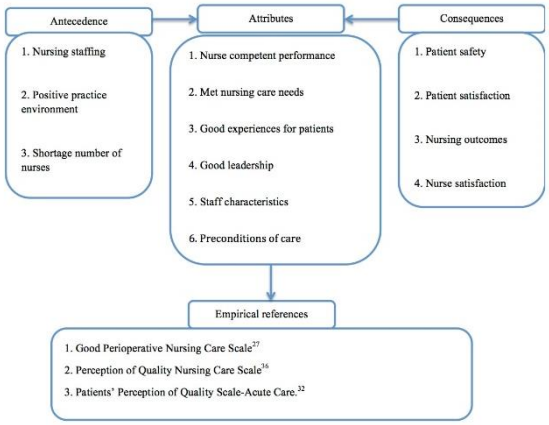

Figure 1: Antecedence, attributes, and consequences.

Data Sources

To determine the scope of data required for the analysis, a literature search was performed on databases including

EBSCOhost, CINAHL, HINARI, PubMed, and ScienceDirect. The terms used for the search were 'quality', 'nursing care', 'nursing care quality', 'nursing outcomes', 'adverse events', 'nursing assurance improvement', 'nursing compliance' and 'nursing-sensitive outcomes'. The search was restricted to articles published from 1993 to 2014, the timeframe considered in other literature reviewed. The total sample extracted consisted of 495 articles from a variety of sources in English including primary, qualitative, and quantitative research, and topical analysis and discussions in professional journals and reference publications. Because of the limited number of articles available, the inclusion criteria was very broad and only excluded those studies which contained the search terms not related to healthcare or nursing. Fifty-eight articles met the inclusion criteria.

Aim and selection of concept

The first two steps of process require identification of a suitable concept and determination of the aims of the analysis.[17] The aim of the concept analysis was to provide a definition of NCQ that would contribute to its effective use in the healthcare profession and provide the basis of operational definitions appropriate for future research in different operational environments and settings.

RESULTS

Results are categorised by the five remaining steps required.[17]

Determination of all possible uses of the concept As an initial exploration of the ways the phrase NCQ is used, dictionary definitions reflect the changing nature of the key words.[17] In British English, 'quality' denotes the standard of something as measured against other things of a similar kind as (1) the degree of excellence of something and (2) the general excellence of standard or level.[18] In American English the definition is similar as (1) how good or bad something is; (2) a characteristic or feature that someone or something has: and (3) a high level of value or excellence.[19] In contemporary usage, applied to product and service delivery, the terms 'quality assurance improvement' and 'compliance' are common. In the US, The IOM defines NCQ as effective, patient-centred, efficient, timely, equitable, and safe.[3] In the data extracted from nursing literature, the term NCQ is associated with various models and attributes. These can be summarised into the following categories.

Structure, process, and outcome model: Substituting a 'high standard' for being 'exceptionally good' argues that NCQ is a complex multi-dimensional concept that must contain both conceptual and operational definitions.[10] He proposed a theoretical framework for nursing and medical care that is widely accepted.[20] This contains three categories for quality assessment: structure, process, and outcome.

Structure: Also known as 'input', this refers to the relatively stable features of an organisation that effect its ability to deliver care and services. Structural variables include the levels and mix of staffing and hospital facilities. 'Process of care' refers to the interactions between provider and consumer and what is delivered by the provider.[21] 'Outcomes' are end results for consumers attributable to antecedent care including changes in, or, more often, the maintenance of health status attributable to the provision or non-provision of care.[21]

Process of care: Good NCQ should also be individualised, focused on patient need, and performed in a culture of involvement with commitment and concern from nursing staff.[22] Some researchers suggested that positive outcomes as 'a good experience for patients' that result from NCQ identified as a process (PC), a 'how', not a 'what' with six core elements. These are (1) a holistic approach to physical, mental, and emotional needs that is patient-centred and continuous; (2) efficiency and effectiveness combined with humanity and compassion; (3) professional, high quality evidence-based practice; (4) safe, effective and prompt nursing interventions; (5) patient empowerment, support, and advocacy; and (6) seamless care through effective teamwork with other professionals.[23]

Process is considered an essential element of NCQ.[8-12] On Donabedian's model (2003), the concept is grouped into assessment (clinical history and physical examination), planning (care plan development and coordination/continuity of care), intervening (performance of therapeutic interventions including teaching and communicating information to patients) and evaluation (measurement of progress towards desired health integrity or quality of life).[10]

Process of care outcome model: A paper employed the Process of Care and Outcomes Model (PCOM) that 'in contrast to Donabedian's view that interventions directly produce expected outcomes, suggests that 'the effect of an intervention is mediated by system and client characteristics, but is thought to have no independent direct effect'. Their study showed that only a minority of patients received up to 60% more direct care during periods of increased nurse staffing.[16] They identified and grouped PC into seven major categories. These are 1) direct patient care controlled by the nurse; 2) direct patient care only partially controlled by the nurse; 3) variable communication; 4) cleaning and taking specimens; 5) non-variable communication; 6) medical preparation; and 7) personal and miscellaneous activities.

NCQ as a function of met nursing needs: In their study 2010 study, which suggests 'that attention to the time nurses spend with patients and maximising patient care delivery could result in a reduction in the occurrence of adverse events in hospitals' complied a composite measure of seven unmet nursing needs. These consist of one) instruct patients or family; prepare patients and

families for discharge; 2) comfort/talk with patients; 3) adequately document nursing care; 4) back rubs and skin care; 6) oral hygiene; and 7) develop or update nursing care plans.[16]

Nursing competence: A study focussed on nursing competence as an aspect of NCQ.[13] Their US study of nursing skills, found that 'high quality nursing equates with competence in the cognitive, affective, and psychomotor domains'. Competence is therefore the ability to perform a specific task, action, or function successfully. It includes the understanding and knowledge of clinical, technical, and communication skills and the ability to solve problems through clinical judgment. However, another investigator concluded from a British study that high NCQ competence is also is influenced predominantly by values' and that 'the key to improvement in practice may be the improvement of emotional and motivational tendencies'.[24]

Nurse and patient perspectives: A study reported that the presence of professional environments in the USA correlated with high NCQ.[25] A Thailand study looked at the relationship of NCQ to the degree to which the patient's physical, psychosocial, and extra care needs were met.[26] However, the study concluded that further analysis of indicators to establish a concept of NCQ was required.

A study was undertaken to delineate patient and family experiences and perceptions associated with their nurse-patient therapeutic relationships and NCQ. Data was analysed using a directed content analysis approach. Two themes emerged, excellent nursing care and to a lesser extent substandard care.[13]

Good nursing care model: Regarding to the comparison of patient and nurse perceptions of perioperative care quality studied, there was the Good Nursing Care Model.[27] Six categories were determined, (1) staff characteristics, (2) care-related activities, (3) preconditions of care, (4) physical environment, (5) progress of nursing process, and (6) cooperation with relatives. These categories can be described as follows:

Staff characteristics: Patients associated NCQ with nursing staff that were careful, flexible, friendly, reliable, polite, work as a team, and are courteous, neat, and tidy in their professional appearance.

Care-related activities: In this sub-category, NCQ is associated with the patient being able to express their feelings, the provision of continuous information about matters related to patient care, a positive attitude to the illness and the situation, and knowing when to call the doctor. Nurses are expected to communicate with patients, actively listen, and talk without unnecessary technical jargon. Nurse should treat patients with respect and maintain patient privacy.

Preconditions for care: This category indicates that NCQ can be achieved if competent nurses have up-to-date knowledge, practical skills, and enough time for patient care.

Physical environment: Attributes of NCQ in this category include, a safe, secure, calm ward with a comfortable bed, clean toilet, low noise, sufficient light, and good ventilation.

Progress of nursing process: This aspect of NCQ refers to short waiting times for nurses to provide interventions after the doctor's instructions, friendly ward reception, and the ability to communicate freely with nursing staff.

Cooperation with relatives: The patients' relatives and caregivers are considered to be of great significance in the provision high NCQ. For example, that they are informed of prognosis, treatment, and instructions for patient care after discharge from hospital. Another example is that they can share angry, stressed, and more open to resolving problems than when they feel misunderstood. They are understood also developed trust and caring between them.

Concerning the results overall, research related to the meaning, definition, and perception of NCQ is limited. The lack of published studies addressing the unique perspective of nurses was specifically noted.[15]They observed that without the nurse's perspective, evaluation of quality patient care is incomplete and ineffective. In fact, the definition and meaning of quality in all healthcare disciplines remains elusive, subjective, and stakeholder-specific; and this results in measurement and improvement challenges.[28]

Creation of defining attributes

Two researchers considered that concepts were context bound and their attributes are not immutable.[17] Concepts change with time, meaning, and situation. In order to capture meaning, grouping similar defining attributes, which appear frequently in association with the concept, offer useful insights. This allows the defining attributes of the concept to be differentiated from germane concepts. As shown in Table 1, defining attributes for NCQ fall into nine categories: nurse competency and performance, met nursing needs, good experiences of care, staff characteristics, good leadership, preconditions of care, progress of nursing process, physical environment, and cooperation with relatives.

Identify cases of NCQ

A set of defining attributes of NCQ was extracted from the relevant literature. In order to facilitate the use of this concept, in addition to an example of a case of model NCQ that fits the concept, the study should identify related, borderline, contrary, and illegitimate examples of

NCQ. This facilitates the construction of an image that will further enable the understanding, application, and development of the concept.[17]

Model case: A model case is a real life scenario of the concept that includes all of its critical attributes, but no attributes of any other concept. It should be a paradigm of NCQ.[17] A model case for NCQ is described as follows:

A medical–surgical nurse is assigned to care for a patient who developed a surgical wound infection. In order to maintain a safe and effective intervention, after a meeting with the patient, the nurse made a comprehensive nursing care plan and then cleaned the wound with an antiseptic solution. In the care plan, the nurse took note of the patient's lack of knowledge about how to protect the wound and gave compassionate advice on how to dress it properly. All activities with the patient were comprehensively recorded in a nursing care document In addition, the nurse worked closely with other nurses and medical doctors by informing them of the positive outcome of the treatment and care. Finally, when the wound healed, the nurse made a patient discharge plan and informed patient and family caregivers

Borderline: A borderline case contains some of the critical attributes, but not all. This inconsistency aids in determining that the model case is accurate.[17] An example of a borderline case of NCQ is as follows:

At a busy emergency department, the head nurse took a leadership role with the nursing team so that all victims of car accident were treated in a timely, professional manner, and with due respect.

Contrary case: A contrary case is clearly not an instance of the concept. The aim is to assist in defining the boundaries.[17]

At a community hospital, staff arrived at work very late and patients had to wait a long time for treatment. The patients complained bitterly about the delays, poor communication, and that there were insufficient numbers of nursing staff in attendance.

Related case: Related cases do not contain critical attributes, but they are similar to and connected with fit the framework the model concept:

A caregiver explained to recovering surgical patient that an exercise plan would be organised to strengthen muscles and aid proper ingestion of foods.

Illegitimate case: An illegitimate case clearly does not fit the concept of NCQ:

A group of fraudsters organise a 'sting' where they appear to be friendly, helpful, and caring in order to defraud their victims.

Identify antecedents and consequences

Identifying antecedents and consequences helps to clarify the critical attributes and the context in which NCQ is applied. Antecedents are events or incidents that must occur prior to the occurrence of the concept, but they cannot be the same as critical attributes. Consequences are events that occur as a result of the concept, that is, the outcomes.[17]

Antecedence*:* In NCQ, antecedents are occurrences that lead a nurse to determine and deliver specific aspects of care provided. These may be risk factors or predispositions towards the concept. The first antecedence of NCQ is nurse-staffing levels, which must be in proportion to the numbers of patients admitted. The second antecedence is positive practice environment settings that support a culture of excellence and good working conditions. In particular, they strive to ensure the health, safety, and personal wellbeing of staff; support quality patient care, and improve the motivation, productivity, and performance of individuals and organisations.[29] Third antecedence is the turnover of nursing staff, which also affects NCQ.[30]

Consequence: There are three identifiable outcomes of NCQ. The first is patient safety, which is a major concern and measured by accident rates and patient mortality.[31] The second is patient satisfaction, which could be measured by exit interviews with patients and relatives. Other outcomes of NCQ includes its effect on administration, including satisfaction with work, morale, therapeutic outcomes, and budget management.

Define empirical references

Empirical referents are useful as they can provide clear and observable phenomena of the concept of NCQ in action or demonstrate its existence.[17] Empirical referents can be directly related back to the defining attributes, which, in some cases may be the same, but they can be measured.

An example of empirical referents used to measure of NCQ from both the nurse and patient perspective is the Good Perioperative Nursing Care Scale.[27] In their study of five Finland hospitals, researchers compared surgical patients' (n = 874) and perioperative nurses' (n = 143) perceptions of perioperative NCQ. The structured questionnaire was divided into five main categories (staff characteristics, nursing activities, preconditions, progress of nursing process and environment). It concluded that 'patients tended to give significantly higher (P <.001) ratings than nurses, but for some items the patients had more critical perceptions. Furthermore, the 'results provide important clues for improving the quality of patient care so that staff activities better serve the needs of patients'.

Patients' Perception of Quality Scale-Acute Care Version was developed.[15] The instrument uses 90 items and

categories of physical environment, psychological aspects of care and professionalism of the nurses.[32] A third example of an empirical reference is The Perception of Quality Nursing Care Scale outlined in the results section of the data sample mentioned above.[33]

CONCLUSION

The term NCQ is widely used throughout allied health literature. Drawing on extracts from the literature, this paper developed a concept of NCQ that represents the meanings, usages, attributes, antecedents, consequences, and empirical referents of the concept. Based on this analysis, the means by which operational definitions could be developed with an empirical basis was indicated. However, it is important to note that this work is only a preliminary exploration of the way in which the concept could be structured. Because of the breadth and depth of modern nursing practice, further research and development is required.

Implications

Nursing administration

Nurse managers could develop strategies that better measure and deliver NCQ by creating and empowering a workplace culture where NCQ is defined in ways relevant to the specific requirements of each operational area. This will ensure best practice and quality assurance with optimal working conditions for nurses and outcomes for patients. This culture would include a teamwork approach that promotes cooperation and continuous feedback on measurement of NCQ.[35]

Nursing practice

There is a clear need to investigate processes of care specific to nursing associated with safer patient care, as well the process of developing safer, more efficient interdisciplinary teams working in various hospital environments. In a discussion of nursing workload measurement tools, the International Council of Nurses noted, 'existing tools are unable to capture more than 40 percent of nursing work'.[34] Addressing variance in the quality of patient care performed by nurses is key to interpreting inconsistencies in the nursing literature and perhaps is at the heart of efforts to improve patient care outcomes. Models of care need to be developed in both acute and non-acute settings to determine the levels of staffing and type of nursing intervention required.

Limitations

This analysis of the concept of NCQ is limited in that nursing care is a context-based activity that will vary between operational environments and the methods used to measure care and outcomes. It is also limited by the fact that the attributes gathered from studies the literature are the only ones available to be included in the definition of NCQ; and, as noted, research to date is limited. The needs of different cultural contexts also need to be taken into account in defining how NCQ is applied.

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