

Staffing in Nursing: A Key to Quality Nursing Care

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Abstract: *Quality nursing care is the buzz word of any healthcare institution. Patients today seek an accredited hospital with advanced care for treatment. With the different emerging accreditation standards for reviewing hospitals, the quality of nursing care must be high to satisfy these standards. Staffing plays a major role in achieving quality patient care. Patient satisfaction and staff satisfaction reflect the quality of nursing care provided to patients. Human resource management with safe staffing becomes the keyword in ensuring the standards of care. Safe staffing includes the appropriate number as well as the appropriate skill mix of the nurses. Evidence suggests that it is not only the number, but the experience and the skill of the nurse that is important to ensure quality patient care. To cut down on the cost spent on human resources, the management needs to focus on the appropriate skill mix of staff to ensure comprehensive care of patients. Safe staffing includes a good recruitment policy, sound deployment of nursing staff, prompt orientation and training, continuing nursing education, and regular performance appraisal with a feedback system to improve the quality and retention of nurses. The myth about quality demands cost needs to be broken to agree that cost-effectiveness and efficiency of workers result in improved quality. Understanding the influence of staffing on the quality of patient care will enable administrators to ensure adequate staffing for better patient care outcomes. This paper emphasizes the need for safe staffing to improve quality patient care.*

Keywords: Quality, staffing, nursing, human resource

1. Introduction

Human resource management is the greatest challenge any institution faces. Especially, in hospitals where there is a demand for healthcare workers throughout the day without any break, it poses great stress for the administrators to ensure a constant supply of healthcare professionals. Particularly, nursing requires a continuous supply of nurses for quality nursing care. Quality of nursing care depends on the efficiency of the nurses as well as the availability of nurses. Availability is often mistaken for numbers, the appropriate number with the appropriate skill and competency of the nurses is essential to ensure quality nursing care. Nursing personnel range from auxiliary nurse midwives, nurse assistants, staff nurses, charge nurses, and nurse managers. Choosing the adequate number of each category of nurses will help to ensure excellent nursing care and also have a cost-effective supply of human resources. This article focuses on human resource management in nursing, quality nursing care, and ways to improve the quality of nursing care.

2. Staffing in Nursing

Human resource management (HRM) is defined as “organizing, coordinating, and managing employees within an organization to accomplish its mission, vision, and goals”¹. This is a process that involves planning, recruitment, selection, induction and orientation, training and development, performance appraisal, and employment decision². Retention of employees becomes the major focus of an organization to cut down costs and to maintain the quality of the care provided to patients³. In nursing, with the shortage of supply of nurses, it becomes a challenge to ensure adequate and appropriate nurses for the patient care⁴. Organizations should be continuously engaged in human resource planning to meet the demands. The staffing process is projected in Figure 1.

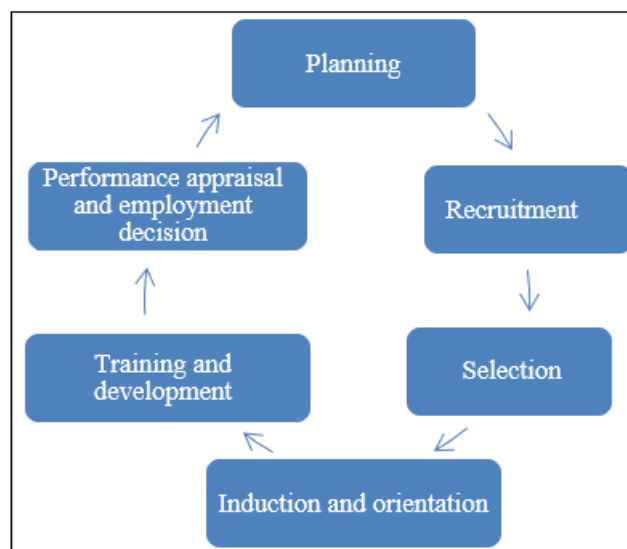


Figure 1: Process of staffing

- Human resource planning:** Manpower planning is the first step in HRM and is defined as “a strategy for the acquisition, utilization, improvement, and preservation of the human resources of an organization”⁵. This involves ensuring that the organization has enough of the right kind of people at the right time and also adjusting the requirements to the available supply. Human resource planning helps to ensure maximum utilization of the personnel, assess future requirements of the organization, determine the recruitment sources, anticipate from records, i.e. resignations, simple discharge, dismissal, and retirements, and determine training requirements for management’s development and organizational development. Manpower planning also depends on the norms of nursing statutory bodies^{6,7}.
- Recruitment:** It is a process of securing applicants to fill vacant positions. The factors that influence the recruitment size of the organization, employment

conditions in the community, the effect of past recruitment efforts, working conditions, salary, and other benefits, the rate of growth of the organization, and cultural, economic, and legal aspects⁸. Recruitment is done both internally and externally, within the institution by, transfers, employee recommendation, retired employees, and internet advertisement and externally through advertisement, campus interviews in nursing colleges, and deputation of staff from one organization to another⁹.

- c) **Selection:** It is the process of making a “Hire” or “No Hire” decision regarding each applicant for a job. The process of choosing qualified individuals who are available to fill the positions in the organization. Factors affecting the selection process are the size of the organization, the nature of the job to be filled, the number of people to be selected, and pressure from outside forces^{10,11}. Nursing selection is based on the qualifications, experience, previous records, and certificates of the nurses. The selection process is effective when the process includes a panel of nursing experts with predefined criteria for selection. The nurses are selected based on qualification, character, conduct, and competency^{11,12,13}.
- d) **Induction and orientation:** The induction program is the process of welcoming new employees into the hospital. It involves preparing them for their new role. It helps in the effective integration of the employee into the organization, development of theoretical and practical skills, and meets the interaction needs that exist among the new employees^{14,15}. Induction and orientation of novice nurses is important to increase retention of newly hired employees, improve employee morale, and increase productivity. Induction includes tours to facilities, introduction to the other employees, superiors, and subordinates, description of organizational functions, departmental visit, orientation to philosophy goals, objectives, administration policies and procedures,^{16,17}.
- e) **Training and development:** Training and development of staff is important to keep the staff abreast of the changes in health care practices. Evidence-based practices in nursing are possible only through ongoing training and development of the staff. Planned education activities closely identified with service are organized by the employer to improve the occupational and personal knowledge, skills, and attitudes of staff¹⁸. Staff

development is an integral part of the staffing process which consists of orientation, in-service education, and continuing education for the people to promote the development of personnel within any employment setting, consistent with the goals and responsibilities of the employment¹⁹. Ongoing education provides an opportunity for nurses to continually acquire and implement the knowledge, skills, attitudes, ideals, and valued essentials for the maintenance of high-quality nursing care. Continuing nursing education results in increasing the productivity and quality of the work of the nurses.

- f) **Performance appraisal:** Periodic evaluation of the staff nurses helps to identify the weaknesses and strengths of the staff and provides a basis for training the staff according to the need for improvement²⁰. It is the assessment of the performance of an individual about the objectives, activities, outputs, and targets of a job over a specific period. It provides feedback to the staff to understand their level of performance and to rectify the areas of improvement. It also encourages the nurses by self-motivation in the areas of better performance.²¹
- g) **Employment decision:** Performance appraisal aids in making employment decisions. For novice nurses, it helps to decide their continuation or confirmation of a job.

Hence, staffing is a major component in the healthcare setup. It not only means providing an adequate number but also includes the process of ensuring that the staff nurses are knowledgeable and competent in their clinical skills. Human resource management also includes providing better working conditions for the staff and allowing the nurses to practice their rights.

3. Quality in Nursing Care

Quality refers to the degree of adherence to pre-established criteria or standards. Quality in health care indicates the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge. Quality in nursing is to provide safe, effective, timely, efficient, people-centered, and equitable care to patients^{22,23}. There are 16 dimensions of quality in nursing care listed by Khan. These dimensions are narrated in Table 124.

Table 1: Dimensions of Quality

S.no	Quality dimension	Meaning
1.	<i>High level of professionalism</i>	: A high level of professionalism guides the behavior of nurses to ensure quality care and patient safety through expanded roles in nursing.
2.	<i>Efficient use of resources</i>	: Quality of nursing care is enhanced with the appropriate usage of resources. Effective utilization of resources includes planning the health resources, obtaining resources, and appropriate allocation of resources.
3.	<i>Reducing the risk for patient</i>	: Prevention of harm to patients is to reduce the risk for patients and promote safety
4.	<i>Patient satisfaction</i>	: Patient or client satisfaction is the ultimate benchmark of quality nursing care
5.	<i>A positive influence on a client's state of health</i>	: Quality of nursing does not stop with care provided in the hospital, it also extends to the home, empowering the patients to maintain good health
6.	<i>Appropriateness of intervention</i>	: Correctness or accuracy of the intervention provided indicates high quality of care
7.	<i>Availability of service</i>	: Making nursing care available to patients at all times
8.	<i>Competency of service providers</i>	: Updated knowledge and skills among the nurses will reflect quality care
9.	<i>Continuity of care</i>	: Continuous care provided to patients with proper handing over will lead to quality of care

10.	<i>Effectiveness of service delivery</i>	:	The health care delivery by the nurses should be effective based on evidence.
11.	<i>Efficacy of intervention</i>	:	Along with effectiveness, timely care provided at the appropriate time is essential.
12.	<i>Efficiency</i>	:	Efficiency indicates the capability of the nurses to provide the best care with minimal resources and a short duration of time
13.	<i>Prevention of harm</i>	:	Avoiding mistakes in nursing care leads to the prevention of harm to patients resulting in quality patient care
14.	<i>Respect and caring</i>	:	Human dignity and justice are ethical principles that govern the quality of care.
15.	<i>Safety</i>	:	Prevention of harm in terms of preventing medication errors, falls, pressure ulcers, needle stick injuries, etc indicates quality of care
16.	<i>Timeliness of care</i>	:	Prompt delivery of care is safe and effective

Staffing and Quality in Nursing

Great challenges are faced by the healthcare system. Staffing numbers, the working conditions, the policies regarding the age of the staff, and the skill mix of staff affect the overall patient care and their outcomes. Research suggests that adequate and appropriate nurse staffing leads to higher patient and staff satisfaction as well as improved patient outcomes. The American Nurses Association (ANA) has worked on safe staffing levels to achieve optimal patient outcomes. Quality of patient care and staff satisfaction are affected due to unsafe staffing. By improving safe staffing, organizations will be able to promise safe hazard-free, and harmless care to patients and the staff^{23,24,25}.

Influence of staffing on quality outcomes

Several studies have been performed to identify the influence of staffing on patient care outcomes. A high positive correlation is established between the quality of staffing and the quality of care. A low patient-to-nurse ratio has shown a decrease in patient risk rates or improved patient outcomes²⁶. Though a few studies do not support the findings and the quality outcome data captured is questionable in the National Health Services of the UK, the majority of researchers have reported a positive correlation²⁷.

A study in the state of California has revealed that safe staffing has improved patient outcomes. It became the first state to pass a law setting a legal maximum patient-to-patient staffing ratio²⁸. The impact of staffing on specific patient and nurse outcomes related to quality is discussed below with research evidence.

- a) **Staffing and patient mortality:** Patient mortality is a highly significant patient outcome which indicates the quality of nursing care provided in a hospital. Several studies have been carried out in different parts of the world which reveal that there is a significant relationship between patient mortality and the quality and quantity of nurses^{25,26,27,28}.
- b) **Staffing and pressure ulcers:** The development of pressure ulcers or bedsores reflects the decrease in the quality of nursing care provided to patients. Pressure ulcers are common among bedridden patients. However, meticulous nursing care can prevent pressure ulcers. The National Accreditation Board for hospitals has pressure ulcers as an indicator of the quality of patient care. Though there are several other factors like the patient's physiological status and the management restriction that can contribute to pressure ulcers, staffing has a great impact on the development of pressure sores. Few studies have revealed that the knowledge of the staff on prevention of pressure ulcers, number of nursing hours,

and prompt assessment on admission influence the development of new pressure sores^{29,30,31}.

- c) **Staffing and patient falls:** Institutional falls are another indicator of quality. Nurses play a vital role in the prevention of falls. Assessment at the admission, identifying vulnerability score, and taking precautions will prevent falls in hospitalized patients. Factors such as slippery floors, non-functioning mobility aids, inadequate lighting, absence of side rails, and slippery toilet floors and seats can lead to the fall of patients. But, nurses have a significant part to play in preventing the above-mentioned risks of falls. The appropriate assessment, adequate information regarding fall prevention, and prompt monitoring and repairing of equipment will reduce the incidents of falls. Nursing numbers and the awareness and commitment of nurses are essential to carry out activities to prevent falls^{32,33,34}. It is identified that the number of nonregistered nurses number is highly associated with falls rather than the ratio of registered nurses. An additional licensed practical nurse (LPN) or nursing assistant (NA) hour was associated with a 2–4% higher fall rate in non-ICUs³⁵.
- d) **Staffing and patient satisfaction:** Any healthcare set up aims to satisfy their patients. Customer satisfaction is the primary goal of any successful management. Patient satisfaction serves as a yardstick to measure the quality of care. It is a great challenge for nurses to satisfy patients. In a multi-linguistic and multi-cultural society like India nurses constantly struggle to satisfy patients. Studies suggest that patient satisfaction is influenced by factors such as the availability of doctors, nurses, and other health care workers at all times without any delay in treatment, shared decisions, providing more than adequate information, more time spent by health care workers, technology-driven care and easy accessibility of services³⁶. In a fast-moving world, people expect things to be done quickly. Efficiency of health care services is sought by patients. Nursing staff availability and approach have a great influence on patient satisfaction^{37,38,39}.
- e) **Staffing and patient interaction:** Nurse-patient interaction or relationship is important to gain cooperation from the patient. Patient satisfaction is escalated with good patient interaction by the nurses. The nurse-patient relationship also aids in collective decision making which is a main key for patient satisfaction. A qualitative study by Molina-Mula and Gallo-Estrada reveals that a good nurse-patient relationship reduces the days of hospital stay and improves the quality and satisfaction of both nurses and patients⁴⁰. To have a sound nurse-patient relationship, the number of nursing hours per patient should be more. The number of staff

nurses on shift greatly influences the time spent with the patient. Not much research has been done in this area, however, it is an emerging area of research and further research is indicated on the staffing and nurse-patient interaction.

- f) **Staffing and hospital stay of patients:** One of the indicators of hospital performance that is widely used is the length of stay (LOS) in the hospital. Hospital efficiency is measured by this indicator. It also reflects the cost of the services⁴¹. Short hospital stay is associated with decreased rates of hospital-acquired infections, cost incurred on the patient, and improved patient satisfaction. Under this assumption, longer than expected LOSs could be viewed as indicative of poor quality care. The number of patient care hours is associated with the length of stay of patients in the hospital. Early identification of complications and prompt management reduces the hospital stay. To prevent delay in care, the nursing numbers and the quality of the nurses are imperative^{42,43,44}.
- g) **Staffing and early management of deteriorating patients:** Early management of deteriorating patients prevents mortality rates and other risk outcomes such as pressure ulcers, falls, missed medication, etc which can lead to quality care for patients. This quality can be achieved by prompt monitoring of patients and periodic assessments as per the standards of nursing care. Consistent monitoring of patients helps the nurse to identify patient deterioration at the earliest and intervene immediately⁴⁵. This prevents the need for care of patients in the intensive care unit and the cost and risks associated with the same. However, consistent assessment of the patient is possible with an adequate number of registered nurses. With the current trend in cost cutting of institutions, the number of registered nurses is reduced, which leads to increasing adverse events. The inappropriate skill mix and the inexperienced registered nurses also contribute to in consistent monitoring of patient^{46,47,48}.
- h) **Staffing and hospital-acquired pneumonia:** Hospital-acquired pneumonia or ventilator-associated pneumonia (VAP) is nosocomial pneumonia that develops in patients on mechanical ventilation for ≥ 48 hours. VAP develops at an estimated rate of 1% to 3% per day of mechanical ventilation. VAP is one of the quality indicators captured by hospitals to judge the quality of care provided. It is one of the patient outcomes which projects the efficiency of the intensive care unit team^{49,50,51}.
- i) **Staffing and catheter-associated infections:** Infection of the urinary tract among hospitalized patients is common. Those with continuous bladder drainage through urinary catheters are prone to infection. It is reported that approximately 75% of urinary tract infections are catheter-associated⁵². Urinary care bundles are introduced in hospitals, especially in the intensive care units to prevent urinary tract infections, however, the staffing levels influence the incidence of these infections^{53,54,55}.
- j) **Staffing and medication error:** Medication error is an indicator that solely reflects the influence of staffing. Break in the principles of administration of medication such as non-adherence to the rights of medication – right

patient, drug, time, medication, frequency, nurse, order, dose, route, and the right to refuse to lead to medication error. Nurses need to be careful while administering drugs. Hospital management has made efforts to prevent medication errors by introducing online prescriptions and triple checks in prescribing, transcribing, dispensing, and administering medication. However, the rate of drug errors remains the same. One of the major contributing factors is the staffing ratio, knowledge of the staff, and negligence by the staff nurses^{56,57,58}.

- k) **Staffing and unplanned patient admission to intensive care units:** Admission to intensive care units results in increased financial constraints for the patient. It also causes psychological trauma and emotional insult to the patient and the relative. An enclosed environment with a lot of machines and sick patients around causes fear among patients admitted to the ICU. Quality nursing care aims to avoid or prevent admission of patients into the ICU or take them at an early stage of deterioration and reduce the length of stay there. Inadequate and inappropriate skill mix of staff has contributed to the cause of readmissions in ICUs^{59,60}.

4. Ways to Improve Staffing

According to the International Council for nurses there are several elements to achieving evidence-based safe nurse staffing which are stated below⁶¹:

- real-time patient needs assessment
- local assessment of nurse staffing requirements to provide a service
- nursing and interdisciplinary care delivery models that enable nurses to work to their optimal scope of practice
- good human resource practices to recruit and retain nurses
- healthy work environments and occupational health and safety policies and services that support high-quality professional practice
- workforce planning systems to ensure that the supply of staff meets patient needs
- tools to support workload measurement and its management
- rostering to ensure scheduling meets anticipated fluctuations in workload
- metrics to assess the impact of nurse staffing on patient care and policies that guide and support best practices across all of these

Several studies have reported that increasing the staffing numbers and the skill mix can be achieved through legal enforcement of a minimum nurse-patient ratio. There are a few countries that have already implemented this, however, every nation should take the initiative to improve the nurses working conditions and the staffing to ensure quality patient care^{62,63}.

5. Conclusion

Optimum nurse-to-patient ratio is a major challenge for nurses in most of the countries. Patient safety depends on the quality of nursing care and the quality of care is influenced by the staffing. It has benefits both for nurses and patients; which is essential for patient safety and quality of care. Some parts

of the world such as California, USA, and Queensland, Australia have passed the law for the minimum nurse-to-patient ratio, which has been scientifically found to be beneficial for the patients and healthcare system. Indian nurse staffing norms given by the Staff Inspection Unit, Indian Nursing Council, and Medical Council of India are developed through professional judgment models and are not updated. It is recommended that research should be performed in the area of staffing such as time spent on nursing activities and the optimum number of nurses required, the recruitment process and training of nurses, and the ways to upgrade the knowledge of nurses to ensure quality patient care.

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