

Review Article

How can high nursing workloads in India be reduced? Solutions for healthcare leaders

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ABSTRACT

When there is a nursing shortage, the nurse-to-patient ratios inevitably deteriorate, leading to a high nursing workload. High nursing workload affects not only patient care quality and patient safety, but also nursing outcomes. High nursing workload is a significant issue in Indian healthcare settings. Despite being a pressing issue, the literature on nursing workload in India is scarce; hence, the author conducted a non-systematic narrative review to fill this literature gap and provide an overview of the current landscape of nursing workload in India, along with solutions to address the issue. The article also provided an overview of the contributing factors to nursing workload and how high nursing workload affects nurses. The scientific literature was located using the PubMed and Google Scholar databases, and grey literature was accessed through reports from international agencies and nursing professional associations. The review revealed that high nursing workload is multifactorial and has several negative impacts on nurses. Potential strategies to reduce nursing workload include improving the nurse staffing levels, incorporating digital technology, providing administrative support to the nurses, and nurse-led coping strategies.

Keywords: High nursing workload, Nurse-to-patient ratios, Nurse workload metrics, Safe staffing policy, Nursing skill mix, Digital transformation in nursing

INTRODUCTION

Nurses are the unsung heroes who play a very critical role in healthcare. They are usually the first to respond to health emergencies and lead the way in disease prevention and primary health care delivery, which includes prevention, promotion, treatment, and rehabilitation.¹

However, there is a global shortage of nurses. The World Health Organisation (WHO) projected that to achieve sustainable development goal (SDG) number 3 on health and well-being, an additional 9 million nurses and midwives will be required by 2030.² As per the State of the World's Nursing 2025 report by the WHO and the International Council of Nurses (ICN), India too is facing a shortage of nurses, with a very low density of 10-19 nursing personnel per 10,000 population.³

Nursing staff shortage leads to a high nursing workload.⁴ Nursing workload is defined as 'the amount of time and care that a nurse devotes (directly and indirectly) to patients, the workplace, and professional development'. Nursing workload is a complex phenomenon and has several attributes, including the amount of nursing time, the complexity of care, the level of nurse competency, the weight of direct patient care, and the amount of physical exertion.⁵

Excessive nursing workloads affect both patients and nursing outcomes. High nursing workloads put nurses at risk of job dissatisfaction and burnout, and raise the likelihood of nursing turnover.⁶ Hence, it is imperative to take measures to reduce nursing workload and prevent its negative impact. Considering that high nursing workload is a significant issue in healthcare settings, the author

aimed to provide potential solutions to reduce the nursing workload in India.

METHODS

To compose this non-systematic narrative review, a comprehensive literature search was carried out using the electronic databases PubMed and Google Scholar. Grey literature was accessed through reports from international agencies and nursing professional associations. Literature on the nursing workload, its causes, effects, and strategies to reduce the nursing workload was discussed. Evidence-based practices of advanced nations to reduce the nursing workload were also discussed alongside other strategies.

The review is presented under the headings of the current landscape of nursing workload, causes of high nursing workload, the impact of high nursing workload on nursing professionals, and strategies to address high nursing workload in India.

THE CURRENT LANDSCAPE OF NURSING WORKLOAD

World scenario of nursing workload

According to a global survey by the International Council of Nurses (ICN), which was conducted among over 2000 nursing professionals from 13 countries, it was revealed that almost half of the nurses experienced heavy workloads. 92% of nurses expressed that, due to the high workload, they were not able to spend sufficient time on patient care due to time constraints.⁷

The whole world witnessed the extreme workload and burden that nursing professionals and other healthcare professionals experienced during the COVID-19 pandemic. 90% of ICN's National Nurses Associations (NNAs) reported heavy workloads, burnout, inadequate resources, and stress related to the COVID-19 pandemic response as the reasons behind the rise in nurses quitting their jobs during and after the COVID-19 pandemic.⁸

As per the McKinsey and Company 2023 report, 45% of United States nurses expressed that they were likely to leave their job because of not feeling valued by their organization and the increasing workload burden.⁹ A study in Italy that was conducted on 240 nurses found that the majority of staff nurses (87.1%) perceived a high level of nursing workload.¹⁰

A cross-sectional study that was conducted on 384 nurses in a tertiary-level hospital in Rajshahi, Bangladesh, revealed that 50% of nurses reported a high workload.

Almost half of the nurses reported not having adequate time for providing emotional support to the patients, and around 90% of the nurses expressed that there was a shortage of nurses in the hospital.¹¹

India scenario of nursing workload

An Indian study that was conducted in 5 states across 93 rural primary health centres (PHCs) and community health centres (CHCs) revealed that the nurses had a very high workload pressure.¹² The findings of another Indian study showed the prevalence of heavy workload among public health nurses, with 75% role overload and 56% role stagnation.¹³

In a study that was conducted on 97 staff nurses working in one of the multispecialty hospitals in Mumbai, 51.5% of nurses reported having mild occupational stress, followed by moderate stress (34%), and severe stress (2.10%). The main causes of occupational stress were found to be workload and conflicts with supervisors, patient, and their families.¹⁴

According to a cross-sectional survey of nurses working in a tertiary care hospital in Goa, the majority of nurses (98.4%) reported moderate to severe levels of occupational stress. Nurses working in general and casualty wards reported higher levels of stress. The primary causes of stress were an excessive workload and patient deaths.¹⁵

According to a descriptive cross-sectional study, nurses working in rural hospitals in the Burdwan district of West Bengal, India, faced significant workload pressure. The findings revealed that nurses faced high workload pressure throughout the Burdwan district. It was found that only 35% of the total required nurses were available, indicating an acute shortage of nurses.¹⁶

The workload scenario of nurses working in private healthcare settings in India is also worrying. A study sponsored by the WHO revealed that nurses working in 16 private hospitals in Delhi experienced high workloads and low nurse-patient ratios in their respective departments. They are required to manage 18-20 patients in the general ward and 3-4 patients in the critical care units. For them, nurse-patient ratios of 1:30 ratio, and 1:22 are common. Nurses are required to manage patient care with a low nurse-to-patient ratio, and they are also expected to complete non-nursing activities. Nurses expressed difficulty in carrying out their responsibilities and providing quality patient care due to high patient workload and additional job responsibilities.¹⁷

CAUSES OF HIGH NURSING WORKLOAD

Nurses experience high workloads due to inadequate nurse supply, an increase in demand for nurses, a reduction in patient length of stay, increased overtime, and reduced staffing levels.¹⁸ High nursing workload is also caused by nursing staff shortage and poor nurse-patient ratio, conflicts at the workplace with nursing supervisors, patient, and their relatives, extra working hours, and unprecedented events like the COVID-19 pandemic.^{4,12,17,19}

Buestan et al used the Six Sigma approach and identified the variables that were significant in predicting nursing workload. These variables were the number of patients in a ward, the number of times medication was given during a shift, the number of nurses, and the type of shifts.²⁰

A study that was conducted on 30 hospital administrators of 30 private multi-specialty hospitals in Tamil Nadu, India, illustrated that nursing turnover leads to excessive workload on the remaining nursing staff and can affect the overall performance of the hospitals. Poor patient satisfaction, complaints from patients, delays in routine patient care, and poor job satisfaction among nurses were also the other impacts of high nursing turnover in hospitals.²¹

A cross-sectional and analytical-descriptive study found that several factors affect the nurses' workload. The study was conducted among 400 nurses working in the intensive care units (ICUs) of all hospitals affiliated with Tehran University of Medical Sciences in Iran to identify factors affecting the workload of nurses in ICU settings. The results revealed that there are a total of 25 factors that affect the nurses' workload, which were split into three categories: structure, activity, and process. The most important factors that affected the nurses' workload included the mismatch between the number of patients and ward capacity, a lack of clear responsibilities and authorities, completing unnecessary activities, and assisting students and newly hired staff.²²

IMPACT OF HIGH NURSING WORKLOAD ON NURSING PROFESSIONALS

A cross-sectional study revealed that nurses missed at least 1 out of 21 components of basic neonatal nursing care when there was a moderate nursing workload, implying that high workload among nurses decreases the time they spend on providing patient care and may increase the likelihood of missed nursing care.²³ Due to the high workload, nurses do not get adequate time to provide patient care and other ward-related work.²⁴ The nurse's workload is also found to be one of the barriers that compromise the communication between the nurses and patients.²⁵

An integrated review of 45 articles revealed that high workload leads to burnout syndrome among nurses, due to which they experience numerous health challenges. The high workload on nurses negatively impacts their health, increases the likelihood of errors, and deteriorates their job satisfaction.²⁶

The findings of a secondary cross-sectional study showed that the prevalence rates of severe musculoskeletal disorders and sleep disorders were higher among nursing professionals than among physicians and other healthcare professionals. This study found that poor posture at work or physical workload was the primary cause of musculoskeletal disorders, with general stress only being a

secondary consequence. In contrast, sleep disorders were primarily caused by stress on and notably off the job.²⁷

A systematic review with meta-analysis per PRISMA guidelines was conducted on 15 and 4 research studies, respectively, to evaluate the prevalence, risk factors, and burnout levels among nurses working in ICU settings. The findings demonstrated the prevalence of high levels of depersonalization (18%), low levels of personal accomplishment (46%), and high levels of emotional exhaustion (31%). The analysis also showed that increased workload and longer working hours have an impact on the likelihood of developing burnout syndrome.²⁸

To identify the sources of occupational stress and the possible solutions, a qualitative exploratory study was carried out on 38 registered nurses through 6 focus group discussions. Nurses expressed that, among other factors, a heavy workload and insufficient nurse staffing contribute to occupational stress.⁴ Both workload and burnout have a direct impact on nurses' job satisfaction, according to a study done on 190 randomly selected nurses. It was significantly proved that job satisfaction acts as a mediator between workload and burnout and the intention to leave.²⁹

A survey research study was conducted on 58 medical-surgical staff nurses working at two teaching hospitals in the South-eastern United States to examine the relationships between workload perception, intent to leave, and burnout. The findings revealed that there were moderate to high levels of burnout among the nurses. More than half of nurses had intentions to leave their current jobs and reported high workloads. Medical-surgical nurses' intention to leave their present job was significantly influenced by their workload perception and burnout ($p < 0.05$).³⁰

A qualitative study that was conducted on 9 managers working in the critical care units (CCUs) of a South African hospital demonstrated that high nursing workload leads to high nursing turnover. Individual face-to-face interviews were conducted with 9 CCUs managers. It was also revealed that nurse absenteeism and poor nurse-patient ratios were contributing factors to high nursing turnover. Additionally, the unit manager's ability to manage and control the CCUs was also affected by the high nurse turnover.¹⁹

Another study revealed that the United States nurses who leave their jobs or are planning to leave their jobs cited burnout as a major reason. The contributing factors to the burnout were the high number of working hours per shift, the stressful work environment, and the inadequate staffing.³¹

STRATEGIES TO ADDRESS HIGH NURSING WORKLOAD IN INDIA

Although nursing workload can be reduced by regularly assessing nurse staffing needs and recruiting more nurses

to ensure adequate staffing levels. The other potential strategies to address the issue of high nursing workload in India are discussed (Figure 1) as follows.^{32,33}

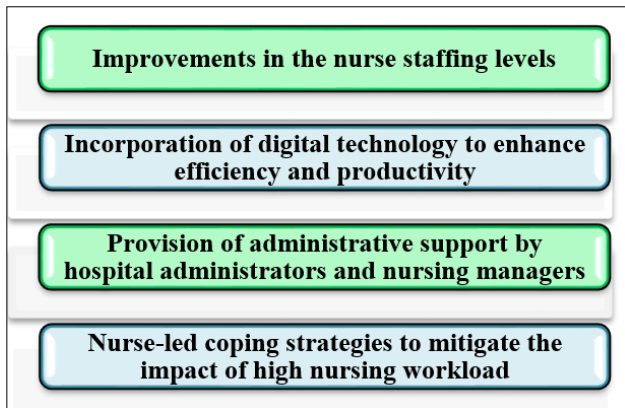


Figure 1: Strategies to address high nursing workload in India.

Improvements in the nurse staffing levels

Better legislation to mandate the nurse-patient ratio

Minimum staffing legislation has been proven to reduce the nurses' workload. Legislation related to mandated nurse staffing levels in California has been shown to improve patient and nursing outcomes. Research revealed that nurses employed in California hospitals subject to mandatory nurse-patient ratios had lower workloads and cared for 1 fewer patient than nurses in Pennsylvania and New Jersey, two other states without such mandates. Additionally, it was discovered that nurses working in California hospitals with mandated nurse-patient ratios reported better nursing care quality and less job satisfaction and burnout.³⁴ Hence, a minimum nurse staffing law in India can be established to mandate minimum nurse-patient ratios. Additionally, the existing nurse staffing norms in India must be revised, based on the actual nurses' workload and the international norms.¹⁷

Utilization of evidence-based and data-driven approaches to estimate the nurse-patient ratio

The National Institute for Health and Care Excellence (NICE) recommends safe nurse staffing and states that various factors determine the nurse staffing requirements, including patient factors, ward factors, and nursing staff factors. The patient factors include patients' nursing needs, patient dependency levels, and patient acuity. Ward factors include ward size, layout, and expected turnover of the ward. Nursing staff factors include non-direct patient care activities like managing the ward, supervising subordinate staff and team, communicating with patient relatives, conducting performance appraisal of staff, and support from non-nursing staff. The NICE states that a single nurse-to-patient ratio cannot be used for all wards. It

recommends that each ward determine its nurse staffing needs.³⁵

Estimating the nurse-patient ratio using traditional methods has several drawbacks, as these methods are rigid in their approach. These methods include *the professional judgment* method by Telford in the 1970s, expert judgments, i.e., benchmarking approaches in the early 2000s, and the volume-based approach.³⁶⁻³⁸ The following evidence-based approaches can be used to estimate the nurse-patient ratio.

Business planning framework

The business planning framework (BPF) is a comprehensive methodology to estimate the nurse-patient ratio and nursing skill mix. It was successfully implemented in Queensland, Australia, in 2021. It evaluates the performance and existing workloads of the nursing staff. It also gives solutions to bridge the gap between the demand and supply of nursing resources. This approach sets a minimum safe nurse staffing level to ensure patient safety and quality patient care.³⁹

Workload indicators of staffing needs

Workload indicators of staffing needs (WISN) is a human resource management tool by the WHO that assesses the workload pressure of the staff and calculates the number of staff required to cope with the workload.⁴⁰

Patient acuity tool for patient care assignments

According to Harper and McCully (2007), a patient acuity tool (PAT) is 'the classification and categorization of patients based on an assessment of nursing care requirements and patient needs.' A patient acuity tool helps to allocate nurses based on the needs of the patients rather than numbers.⁴¹

The Perroca PAT is an effective acuity tool that enhances nurse satisfaction and helps managers in crucial staffing decisions such as employing new staff, assigning tasks to staff, recruiting staff, and improving patient care quality.⁴² The safer nursing care tool (SNCT) by the Shelford Group (2014), widely used by English hospitals, is also an effective patient acuity-based tool. It calculates the number of nurses to be employed based on the patient acuity and level of dependency on nurses.⁴³

Incorporation of digital technology to enhance efficiency and productivity

The use of computer information systems for effective and accurate implementation of the nursing process can be encouraged for digital transformation in nursing to save time and improve productivity.⁴⁴

The findings of a scoping review revealed that numerous digital technologies can be used to reduce nursing

workload in healthcare organizations. These include digital information solutions, mobile applications, digital tools and media, assistive devices including personal digital assistants (PDA), home telehealth, teleconsultation, and electronic clinical decision support systems (ECDSS).⁴⁵

Provision of administrative support by hospital administrators and nursing managers

Regular assessment of nursing workload using the following tools

Hospital administrators and nursing managers can regularly assess the workload pressure among nurses to ensure that they are not overburdened, using the following tools.

NASA task load index (NASA TLX) is a tool that measures the overall workload. It measures 6 dimensions of workload, including the physical demand, subjective mental demand, temporal demand, effort, performance, and frustration level of the staff.⁴⁶

Nursing activities score (NAS) is a tool that measures the nursing workload, especially in ICU settings. It measures 7 major categories and 23 activities. The categories consist of basic activities, metabolic support, renal support, neurological support, cardiovascular support, ventilator support, and specific interventions.⁴⁷

Therapeutic intervention scoring system-28 is a tool that measures the nursing workload in the ICU setting. It contains items based on therapeutic interventions and considers the severity of the illness of patients.⁴⁷

GRASP workload management system (WMS) is a software-based tool that measures the time taken by each nursing task and estimates the nursing workload.⁴⁸

Periodic measurement of job-related stress

Hospital administrators and nursing managers can regularly assess job-related or occupational stress among nurses, followed by timely interventions using tools like the Maslach burnout inventory (MBI), perceived stress questionnaire (PSQ), the nursing stress scale (NSS), depression, anxiety, and stress scale (DASS), perceived stress scale (PSS), stress symptom list (LSS), and the state-trait anxiety inventory (STAI).^{49,50}

Fostering effective teamwork

Effective nursing teamwork consisting of support, trust, team leadership, team orientation, and shared mental models has been linked to lower nurses' fatigue levels. Hence, fostering and strengthening teamwork among nursing staff can be encouraged. It can reduce the adverse effects of high nursing workloads on nurses' fatigue levels.⁵¹

Nurse-led coping strategies to mitigate the impact of high nursing workload

Nurses can be encouraged to adopt individual strategies to cope with the repercussions of high nursing workloads. An umbrella review that was conducted using the Joanna Briggs Institute (JBI) guidelines, involving 11 high-quality systematic reviews from 2012 to 2021 to integrate the effectiveness of individual-based strategies for reducing nurse burnout, revealed 3 main categories of strategies that can reduce nurse burnout. These strategies include yoga for physical activity, mindfulness-based stress reduction for mental health, and professional competency education. These strategies were recommended as they were found to effectively decrease occupational stress, emotional exhaustion, and depersonalization among nurses in hospital settings.⁵²

DISCUSSION

The review found that the high nursing workload is a common and challenging issue globally and in India. High nursing workloads are multifactorial and have negative impacts on nursing outcomes.

High nursing workload is a multifaceted issue.¹⁸ Nurses spend almost one-third of their time performing non-nursing tasks. A cross-sectional study in 2017, which was conducted on 733 nurses in the Italian Provincial Nursing Board, revealed that the majority (94.5%) of nurses have performed at least one type of non-nursing task. Nurses are expected to be adaptable; they are expected to perform duties outside the scope of their job responsibilities and education. It significantly reduces the care they provide, leaving patient care needs unfulfilled.⁵³ Another study revealed that approximately 10% of a nurse's time was allocated to tasks that could be assigned to someone else and were not related to nursing.⁵⁴ Time-motion studies can be useful in determining how much time nurses spend on non-nursing tasks. Identifying and delegating non-nursing tasks to ancillary staff can reduce nurses' workload.⁵⁵

The burden of administrative duties is also a substantial contributor to the nurses' workload. A significant amount of a nurse's time is frequently dedicated to paperwork and other non-clinical tasks. Studies have found that nurses spend around one-fourth of their time (31%, 25%) on documentation alone.^{54,56} Nurses also have time constraints on how long they can spend meeting patients' needs because of the mandatory documentation that must be completed within a specific time frame.⁵⁷ Nurses can work efficiently and save a significant amount of time in documentation through the integration of digital technologies.⁴⁵ However, documentation using stationary computers remains a big challenge. Portable digital devices can be extremely beneficial in addressing this problem. Employing assistive robotics for handling logistical and laborious physical tasks can also free up nurses' time, enabling them to concentrate on other patient care responsibilities.⁵⁸ Though digital technologies can

reduce the nurse's workload, it was found that they can also increase the nurse's workload.^{45,59} Hence, training the nursing staff to optimally use these digital devices can be provided.^{45,60}

The International Council of Nurses (ICN) endorses the International Labour Organization's (ILO) Constitution and the Occupational Safety and Health Convention, 1981 (No.155), which aims to safeguard workers or staff from work-related illnesses, diseases, and injuries.⁶¹ Hence, it becomes the responsibility of healthcare leaders, hospital administrators, and nurse managers to take steps and address the issues and challenges resulting from high nursing workloads. Training for nurses focusing on time management can be arranged, as it has been found useful in reducing nurses' occupational stress. The workload for nurses can also be reduced by providing professional development courses that emphasize stress-reduction strategies along with time management. These courses equip nurses with the skills they need to better handle their responsibilities and look after their health.⁶²

The ICN recommends that healthcare employers foster a supportive practice environment for nurses with the provision of high-quality leadership, adequate nurse staffing, and manageable workloads.⁶¹ Whereas Bahadori et al suggested creating clear job responsibilities for nurses, admitting patients based on ward capacity, utilizing new equipment and technologies, and offering basic training for newly employed nurses to reduce the nurses' workload.²²

The author believes expanding the nursing workforce and maintaining adequate nurse-to-patient ratios based on patients' needs are the keys to addressing the high nursing workload, and recommends utilizing the strategies outlined in this review to manage high nursing workload situations.

CONCLUSION

For India, high nursing workload is a challenging issue. It negatively affects the nursing outcomes. It is high time that the Indian healthcare leaders intensify their efforts to address the high nursing workload and prevent its repercussions. Healthcare leaders, hospital administrators, and nurse managers can apply the discussed strategies in this review to reduce the nursing workload in their respective healthcare settings. Future research should focus on developing standardized tools to measure nursing workload across diverse healthcare settings. Longitudinal and qualitative research studies should be conducted to assess the long-term physical and mental impact of high nursing workload on nurses.

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