Impact of two Staffing Patterns on Nurses Job Satisfaction Quality of Nursing Care and Patient Satisfaction of a Selected Hospital in Riyadh

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Abstract

Background
Adequate nurse staffing is crucial for enhancing patient care quality and nurse satisfaction. Inadequate staffing patterns, such as the common 1:1 nurse-to-patient ratio, lead to high turnover rates, decreased job satisfaction, and poor patient care. This study investigates the impact of staffing patterns on job satisfaction, nursing activities, and patient satisfaction at a Tertiary Care Hospital in Riyadh, Saudi Arabia.

Methods
A cross-sectional study design was employed, involving 200 nurses from the Tertiary Care Hospital in Riyadh. Participants completed a 12-question survey assessing their experiences with current staffing patterns, prior work experience, and perceptions of staffing practices. Data were analyzed using IBM SPSS version 21, with descriptive statistics and regression analysis employed to evaluate the relationship between staffing patterns and outcomes.

Results
The study found that nurses with shorter tenure and limited prior experience reported dissatisfaction with current staffing practices, attributing this to improper workload distribution and a negative work environment. The mean duration of employment was 2.215 years, and responses indicated a need for improved staffing practices. While moderate support was observed for implementing a 2:1 nurse-to-patient ratio, opinions on its efficacy varied.

Conclusion
The study highlights that inadequate staffing and improper workload distribution negatively impact nurse job satisfaction and patient care quality. Implementing optimal staffing patterns, such as a 2:1 ratio, is recommended to improve nurse satisfaction, reduce burnout, and enhance patient care outcomes. Addressing these staffing challenges is essential for improving overall hospital performance and nurse well-being.

Keywords: Nursing Care, Patient Satisfaction, Satisfaction Quality

Introduction

Adequate nursing practice and staff are important for enhancing the overall quality of care. Proper nurse staff pattern enhances the work engagement, nurse satisfaction, and retention rates within healthcare organizations [1].

Nursing patterns are directly related to the quality of services provided to the patients. In the UK, it was found that wrong staffing patterns lead to improper work distribution and huge turnover of nurses from well-reputed organizations, creating a shortage of healthcare professionals, especially in maternity care [2]. This was due to a lack of organizational commitment in hiring qualified healthcare professionals and providing ade-

quate training has created a significant gap between the demand for and supply of skilled nurses. It was found that this gap was further increased by the migration of nurses to countries like the UAE and Qatar for better career opportunities [3]. Furthermore, a study in the UK has reported that there has been a shortage of nursing staff of nearly 50,000 caregivers due to inefficient staffing practices and demanding work schedules before the pandemic of COVID-19 [4]. Moreover, this shortage was worsened by raising nurse-to-patient ratio of 1:11 which has caused a decrease in patient satisfaction as well nurses satisfaction in job hence reduced the quality of nursing care. The traditional staffing practice is based on 1:1 staffing pattern, which has proven insufficient in the management of environment where these is

high patient inflows and nurses are forced to handle excessive workloads, this also contributes in diminishing their job satisfaction and increasing turnover rates [5, 6].

The Tertiary Care Hospital in Riyadh, one of the oldest hospitals in Saudi Arabia, faces similar challenges. With a diverse range of services, including a 24-hour emergency department, medical and surgical facilities, orthopedics, and mental health care, the hospital has struggled with inadequate nurse staffing [7]. As the hospital's patient inflow increased due to its partnership with the Ministry of Health in KSA, the existing nursing staff fell short of meeting patient needs effectively. This led to the implementation of a 1:5 staffing pattern during emergencies, which, although necessary, significantly increased the workload on nurses and negatively impacted their job satisfaction and the quality of care provided [8].

The improper distribution of nurses in healthcare leads to high turnover rates, decreased job satisfaction, and reduced quality of care. This issue is particularly severe in the UK, where over 60% of nursing staff consider leaving their profession due to inadequate staffing and increased workload. The Tertiary Care Hospital in Riyadh faces similar challenges, with a significant gap between patient needs and nurse availability [9].

This study aims to determine the impact of two staffing patterns on nurses' job satisfaction, nursing activities, quality of care, and patient satisfaction. Objectives include identifying the importance of these patterns, evaluating their impact, and recommending strategies to overcome staffing challenges. By assessing nurse-to-patient ratios based on workload indicators, the hospital aims to better allocate nursing personnel.

This study aims to derive a recommended optimum nursing manpower plan for a hospital by investigating the current challenges and exploring the need for better staffing strategies.

Methods
A cross-sectional study design was employed for this study involving nurses from a Tertiary Care Hospital in Riyadh. The study aimed to analyze the nursing activities and their impact on healthcare quality in a Tertiary Care Hospital in Riyadh. Overall, the design was descriptive, which systematically describes the impact of nurses over patient satisfaction.

The study was conducted in a tertiary care hospital in Riyad, Saudi Arabia. The hospital was established in 1917 and considered one of the oldest hospitals. It had 24-hour emergency department, medical and surgical care, orthopedics, and mental health services. In 2017 the hospital had over 250 nursing staff, but this number was insufficient for effective management of pa-

tients, that lead to decrease in patient satisfaction and a decline in the quality of nursing care.

Participants
The sampling method employed for the selection of the participants was non-probability random sampling to ensure the diverse and generalized sample of the nursing staff. 200 nurses participated in the study and answered a survey of 12 closed ended questions. The survey allowed the collection of empirical data from the nursing staff present in the field.

Variables
The study aimed to assess the impact of nurse staffing practices on patient satisfaction at a tertiary care hospital in Riyadh using a questionnaire. The key factors that are assessed in the study was length of employment to understand how job tenure may affect responses. Previous experience in other hospital units is examined to evaluate how past roles influence current perceptions. Reasons for leaving previous jobs are investigated to identify factors that impact staff retention. The survey also probes challenges in manpower planning, aiming to uncover perceived issues in care provision. Respondents' opinions on whether workload distribution patterns and the positive impact of different staffing practices are sought to evaluate their impact on workload and work-life balance.

Survey
The survey tool was designed by doing a literature review and expertise of researcher with experience of working in the field. A total of 12 close ended questionnaire were designed to explore the relationship between nurse staffing practices and patient satisfaction in a tertiary care hospital in Riyadh. The aim of the questions was to assess the respondents' experiences with the tertiary care hospital and previous work environments, and perceptions of staffing practices. The questions focused on various factors like workload distribution, management support, and the impact of staffing patterns on employee satisfaction, work-life balance, and quality of care.

Statistical Methods
Reliability was ensured during the data analysis. Furthermore, exploratory data analysis was employed to assess and identify the inconsistencies in the data. The data analysis was conducted using IBM SPSS version 21. Descriptive statistics like mean, median, mode, standard deviation was calculated to find the demographics and frequencies of the variables. To thoroughly evaluate the relation of nursing staff with patients' satisfaction regression analysis was conducted over the responses. Furthermore, these tools ensured the validity and reliability of the findings of the study.

Results

A total of 200 participants were included in the study. The Findings of The Study Are Presented in Table 1.

Table 1:

Question	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis
Q1	200	3.00	1.00	4.00	2.215	0.85583	0.732	0.213	0.342
Q2	200	2.00	1.00	3.00	1.380	0.69860	0.488	0.849	0.342
Q3	200	2.00	2.00	4.00	3.360	0.74375	0.553	-0.879	0.342
Q4	200	3.00	1.00	4.00	1.765	1.07497	1.156	-0.133	0.342
Q5	200	3.00	1.00	4.00	1.780	0.98817	0.976	0.043	0.342
Q6	200	4.00	1.00	5.00	2.020	1.36709	1.869	-0.125	0.342
Q7	200	4.00	1.00	5.00	2.760	1.17015	1.369	-0.935	0.342
Q8	200	4.00	1.00	5.00	2.370	1.07184	1.149	-0.165	0.342
Q9	200	2.00	1.00	3.00	2.105	0.50522	0.255	0.739	0.342
Q10	200	3.00	1.00	4.00	1.355	0.72913	0.532	5.089	0.342
Q11	200	4.00	1.00	5.00	1.645	1.12931	1.275	3.153	0.342
Q12	200	3.00	1.00	4.00	1.830	1.00306	1.006	-0.449	0.342

The analysis shows that when the duration of work was assessed in the tertiary care hospital of Riyadh, the mean duration of work was 2.215 years ranging from 1 to 4 years. Furthermore, the relatively low standard deviation (0.85583) indicates that most respondents have been with the hospital unit for a relatively short period indicating that most of the participants were not that old.

Moreover, when asked about the experience at other hospitals, the mean response was 1.380, indicating that most respondents have not worked in other hospital units before joining their current organization. This suggested that most of the participants were newly hired here and no prior experience to compare to this institution. The number of previous hospital units' participants have worked ranged from 2 to 4 units and the mean was 3.360 showing those who have worked at other places varied and have a broad working experience.

Regarding the reason for leaving the previous organizations, most of the respondents Mean (1.765) indicated that improper workload distribution and negative working environment were the reason of leaving the previous job highlighting the significance of staffing practice and perception.

Regarding the understanding of major issues face during the manpower planning and provision of optimum care services. The participants indicated that Low employee count and inappropriate processes are seen as major problems at the current institution showing participants discomfort toward current participating practices. This was further confirmed by the answer (mean 2.020) that there is general agreement between the participants about the current need of reconfiguration of staffing practice in the current hospital. Similarly, respondents agreed, however, moderately about implementing two staffing practices that can alleviate the workload distribution problem. Furthermore, the participants also believed that these two staffing practices would improve work-life balance for nurses.

When inquired about the perception of nursing staff about organization's management believe in the concepts of two staffing patterns. The Reponses were somewhat confused (Mean: 2.105, Range:1-3) about the belief of management reflecting the potential gap of in perception of management and staff.

However, the respondents believed that two staffing practices could improve nursing service quality and are satisfied despite the variability in responses (Mean:1.645). Lastly, the respondents when inquired about the organizational strategies to mitigate challenges and optimize nursing and quality of care it was believed that Proper workload distribution planning and adequate manpower recruitment are seen as key strategies for addressing challenges and improving care quality.

Overall, the results showed that there is a need for improved and better staffing practices and workload distribution. While there is moderate support for the benefits of two staffing practices, opinions on their implementation and impact vary. The results highlight a need for targeted improvements in staffing strategies and alignment between management and staff perspectives.

Discussion

Nurses are the key element of the healthcare system. They establish a connection with patients and doctors to ensure quality patient care. It is believed that various factors such as excessive workload, lack of flexibility, and a negative work environment are significantly associated with productivity and burnout of nurses. It is critical to understand that nurses are necessary for the hospital image and working environment as they also facilitate effective patient communication and recovery [10].

It is revealed in various analyses that improper workload distribution and heavy workloads significantly contribute to burnout among nurses. These problems are also increased by inadequate nurse-patient ratio and poor healthcare infrastructure, lead to both mental and physical stress, reducing the quality of patient

care [11]. In our survey where 200 nurses from the Tertiary Care hospital were involved showed that improper workload distribution is a major factor driving nurses to leave their jobs.

IT is stated by the Ali et al. in his study that the burnout is also increased due to improper work distribution, this not only decreases the performance as well as decrease the job satisfaction [12]. Furthermore, our finding relate to the finding of another previous study where it was found that mental and physical stress are key reasons for leaving the healthcare sector. Moreover, factors such as lack of proper infrastructure and inadequate support further contribute to these issues [13].

Our analysis highlights the need for improving the work culture for better and effective operations with the minimal burnout. It is important to mention that proper planning and management from the administration can enhance the working environment and aid the workload issue. This will not also retain the staff but also enhance the workers satisfaction [14]. Effective solutions include ensuring an appropriate nurse-patient ratio and implementing sound staffing procedures [15].

It is important to mention that various challenges are present in the handling of manpower and care services. One of those is the inadequate infrastructure and lack of advanced technologies [16]. Out analysis showed the similar findings where they believed that modification in the current framework of nurse staffing is required to enhance the patient satisfaction and reduce the burnout of the nurse. It is believed that COVID-19 pandemic has worsened these problems, which lead to decrease in the skilled staff and increased stress among those who are remaining. This disruption in the manpower planning has led to shortage of nurses and negatively impacted patient care [17]. The survey reflects that reduced staffing during the pandemic is a primary cause of disrupted manpower planning and care services.

Moreover, another key factor that reduces the manpower and ultimately patient care is the lack of motivation and interest among nurses. IT has been said in a previous study that adequate manpower is essential for providing quality care and maintaining effective planning [18]. However, in our study it was found that most of the participants had no prior experience work experience and retained in the current hospital for almost 2 years showing lack of personnel retention and motivation to continue the job in the current hospital. This might also be due to the increased work pressure and poor support from management result in decreased nurse performance and motivation, leading to higher turnover rates and diminished patient care quality [19].

It is recommended that To address manpower issues and enhance care quality, the Tertiary Care hospital in Riyadh should adopt effective staffing and workload distribution strategies. Emphasize that hospitals need to focus on costs, technology, workplace culture, and workload to make informed decisions that boost manpower and optimize work distribution [20]. Note that improper workload distribution negatively impacts nurse efficiency and patient care quality [21]. More workloads lead to increase burnouts and staff shortages, this ultimately causes decrease in performance and patient satisfaction [22].

By implementing the optimal staffing patterns, i.e. two nurses per patient on different shifts, can lessen these issues [6]. Our findings also supported this conclusion where the respondents believed that two staffing practice can decrease the burnout and increase the patient satisfaction. By implementing such patterns, the management can improve job satisfaction, reduce stress, and enhance patient care by allowing nurses to manage their workload more effectively. In his study indicated that proper nurse-to-patient ratios improve safety and care quality. Therefore, adopting these staffing processes can lead to better nurse retention and improved healthcare outcomes [23].

It is shown in our study that most participants view the nurse-to-patient ratio as a factor that is beneficial for achieving work-life balance. Recent studies have also emphasized on its importance due to the increasing pressure on nurses, which has led to anxiety, stress, and declining mental and physical health [24]. It is observed that where the nurse-patient ratio is greater, there is more job dissatisfaction and poor work life balance. Therefore it is mandatory to properly manage this ratio to enhance physical, mental, and emotional well-being of nurses so that they can perform their duties more efficiently [25].

In the UK, the number of appointed nurses decreased from 593,000 in 2021 due to work-related mental stress. An effective nurse-to-patient ratio can reduce clinical errors and patient death rates, potentially increasing nurse employment by 15% and reducing burnout by 30% [26]. This ratio also considers patient needs, available resources, and experienced staff.

Assert that safe staffing practices improve patient health by maximizing care quality and reducing hospital readmissions [25]. A balanced nurse-to-patient ratio enhances job satisfaction and provides a positive work environment, which leads to better patient care and reduced workload-related stress [27]. By assigning two nurses per patient, hospitals can improve the overall nursing system, increase manpower, and enhance service quality.

This staffing approach mitigates operational issues, enhances nurse satisfaction, and improves patient outcomes. Effective staffing patterns lead to better patient care, decreased readmission rates, and reduced nurse fatigue. Highlight that a healthy work environment is crucial for job satisfaction, which is achieved through proper workload distribution [28].

Overall, implementing an appropriate nurse-to-patient ratio optimizes patient safety, improves operational efficiency, and enhances employee retention. Hospitals should focus on training programs that support these staffing practices and recruit compassionate individuals dedicated to high-quality patient care. This strategy will lead to increased organizational success and improved nurse well-being [29].

Conclusion
Healthcare units globally rely heavily on nurses for quality patient care, impacting their reputation and revenue. In Saudi Arabia (KSA), nursing staff shortages have worsened post-pandemic, with a common 1:1 nurse-to-patient ratio negatively affecting care quality. The situation is further compounded by poor work

distribution, leading to high turnover, low job satisfaction, and increased stress among nurses. Research at a Riyadh tertiary care hospital, which uses a 1:5 staffing pattern, reveals that better work distribution and staffing practices, such as a 2:1 ratio, can improve nurse job satisfaction, reduce burnout, and enhance patient care quality. Adopting appropriate staffing patterns and improving work conditions are crucial for addressing these issues, thereby increasing organizational effectiveness and patient outcomes.

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