

The Impact of the Work Environment on Nurses' Satisfaction and the Quality of Care Provided to Patients

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Abstract

WORKPLACE conditions are an important consideration in creating the necessary environment for nurses to provide the best possible care. High-quality care is the foundation of patient safety and value in health care. The focus is primarily on the impact of nursing staffing conditions and their effects on patient outcomes. However, workplace conditions play a broader role. A recent study on workplace conditions found that organization, collaboration with physicians, and meaningful recognition were the top three effective workplace conditions related to high quality and safe patient care delivery (Havaei et al., 2022).

The key point is that workplace conditions are linked to patient care through the mental health of nurses. Moreover, a negative impact of male supervisors was revealed on patient care delivery, which was an entirely new narrative. Globally, nurses are an essential part of the health-care workforce in the health-care delivery system. Currently, there are about 2.9 million registered nurses in US; however, the US still needs an additional 2.65 million nurses for them to meet their health delivery needs. The impact of the decrease in nurse workforce is not limited to patient care but also has a significant adverse effect on job satisfaction, workplace safety, and quality of care provided. In this context, in order to ensure that nursing staff providing minimum care standards is satisfied with their work, indispensable workplace conditions and organizational requirements must be met. (Sampaio et al.2020)

1. Introduction

Nursing care is a service process that includes preventing diseases, maintaining health, and providing treatments in the event of illness, injury, or disability. It also includes medical treatment, specialist treatment by therapists, prevention of complications, and post-treatment instructions. This process includes various steps to which different nurses contribute, but the unit in which nursing care is provided also influences the quality of nursing care. The layout of the department and the working conditions of the staff, the composition of the care team, compliance with procedures, teamwork, and communication between medical/nursing disciplines are important factors (Brešan et al., 2021). Quality care is also related to patient monitoring, the effectiveness of the indicators of safe nursing care, the satisfaction and ethical principles of the operation, and the professional

improvement of the nursing team. In Slovenia, there are currently more than 30,000 active nurses and healthcare technicians; the number of nursing staff is increasing as in the rest of Europe. Nursing professions are physically and psychologically demanding and are associated with a high risk of occupational injuries. In addition, there is often an imbalance between the demands of the work environment and the resources, and the quality of care can be significantly compromised as a consequence. Older patients and residents of health or social institutions have problems with chronic diseases and have multiple diseases. Therefore, nursing practice requires an integrative, multi-professional approach to providing quality and safe care. Due to the age structure of the elderly population, the requirements of the care process are increasingly demanding.



1.1. Background and Rationale

Nursing is an important profession. There is no second opinion that nurses play an essential role in the healthcare system. They are one of the building blocks of healthcare delivery. Working in hospitals, health centers, and long-term care facilities, nurses are continuously in direct contact with patients. The nursing profession is a multifaceted healthcare discipline with a significant impact on the health of the population. On a daily basis, they diagnose, promote, and maintain the physical, emotional, and psychological well-being of individuals and families or groups. Nursing is not just an interaction between the health professional and the sick clients. It is not just an assessment, diagnosis, implementation, and evaluation of the nursing process. Nursing is much more than that. Nursing is a common, prevailing, and continuous complex procedure that is frequently intertwined with periodical evaluations and adaptations. It is much more complex than it meets the eye in institutions. (Duffy, 2022)

Nursing requires social, personal, and technical expertise, and caregivers undertake important tasks in health organizations. The duties carry not only calculation but also intuition and experience. The responsibilities constantly increase with the changing and developing health policies, the expectations of patients and their acquaintances (Havaei et

al., 2022). There is no doubt about the fact that the effect of nursing services on the health and recovery process of the patients is immense. Because of this, and other reasons, in order to support the quality of health care given to the patients, the quality of nursing services should also be meritorious and advantageous as it is possible.

1.2. Research Aim and Objectives

High levels of work-related stress, burnout, job dissatisfaction and poor health are common among nursing professionals. Industry safety and health issues related to work environment have always been an important concern in the health sector. Nursing staff play an irreplaceable professional role in hospitals and are the largest group of health care workers in hospitals. The comprehensive understanding of nurses' psychosocial work environment is necessary to respond effectively to the complex needs of patients suffering from modern diseases. An extensive review evidenced several questionnaire-based surveys conducted worldwide across general hospitals reporting work environment as an important predictor for a wide range of nurse outcomes. It was found that where one third of the studies examine work environment separately, a large body of research provided paucity of information on linkages between practice environment, work attitudes and outcomes denoting a research gap in the developing literature. (Akinwale & George, 2020)

There is a complex relationship between the work environment, burnout, and work satisfaction of nurses. The objective of this study is to understand the relationship between the environment of practice, the quality of care provided, and the satisfaction of nurses in practice. The process approach to quality management paradigm is adopted to explore this relationship. A comprehensive cross-country survey of nurses working in hospitals has been done, using a complex model of linear regressions taking into account the hierarchical structure of the data to examine these relationships in more depth, testing also for the relative importance of the specific attributes of the work climate of nurses. The study revealed a significant connection between the various aspects of the work environment and the impact on outcome variables for different groups of hospitals, measured by nurses' job satisfaction. At the level of primary care, the examination of nursing care also shows a significant correlation with the different perceptions of the work's public effect on post-traumatic incidents by nurses. (Aloisio et al.2021)

2. Theoretical Framework

The study anchors itself in two theoretical frameworks used in previous studies. Conceptualization and operationalization of a key variable are drawn from a structural theory. This theory suggests the importance of the structural conditions of organizations in engendering both satisfaction and growth-facilitating conditions for all employees in general and male and female employees in particular. Nursing scholars hypothesized that the quality of care provided to female patients by female nurses will be affected by the demographic characteristics of the nurse's work environment, specifically the proportions of male and female nurses in the work group, as well as by the gender effects of room variables including patient mix, decision-making responsibility, geographic distribution, and nursing care load. They also concluded that a gender balance within the work group was likely to produce the best outcomes for female nurses and their female patients, and potentially for hospitals at large by enhancing the retention of the nurses most in demand. (Mihdawi et al.2020)

2.1. Work Environment Theories

Multiple studies have found that a better work environment increases nurses' satisfaction and the quality of patient care. The work environment features that influence nurses' satisfaction and patient quality of care have been identified in the literature. Also, several studies examined the impacts of country culture on the work environment. What is missing in the literature is a study that investigates the way the work environment influences the quality of care provided to patients by nurses and what can be done to improve it.

Research on the impact of the work environment on nurses' satisfaction and quality of care has focused primarily on healthcare professionals or single dimensions of the work environment and the outcomes. The few studies that have included several dimensions of the work environment focused primarily on European countries and used only one country for comparative multinational research. Our research fills the existing voids, providing the results of an international comparative study conducted in the United States and Poland. The objective of the study was to identify the impact of the work environment of nurses on their satisfaction and the quality of care provided to patients. The instrument was selected in order to measure nurses' satisfaction, the Practice Environment Scale of the Nursing Work Index to measure the work environment characteristics, and the International Hospital Outcomes Study to measure patient quality of care. (Azizi et al., 2021)



2.2. Job Satisfaction Theories

This concept has been studied since the beginning of the 20th century until the present day, using various theoretical constructs. Job satisfaction is the bond that links one person to the behaviors and attitudes of others in the community, contributing to the quality of life. It is an important variable for organizations, as it is related to health, mental well-being,

and what characterizes being a happy human being. Therefore, many studies base the positive responses of individuals with high job satisfaction, both at the professional and personal levels. That is why this variable has been closely related to problems such as labor dissatisfaction, stress, absence, fluctuation, performance, physical and mental health, and the reduction of the quality of care offered to patients, which are the subjects of this study.

Job satisfaction consists of people's feelings and behaviors when they perceive they are obtaining their work-related needs. In other words, it is the positive emotional state attributable to the appreciation of a person's job. In the interpretative sense, job satisfaction refers to happenings or emotions that sum to a positive emotional reaction, or the perception of a situation, and of an object beyond others. Job satisfaction is a broad aspect that has been a subject of human evaluation. It has been related to educational level, defenses, knowledge, training, dedication, and social-psychological differences among employees. Satisfaction derived from humor is considered important for people's functioning in any society. For those working in health, it is important for workers and patients. Satisfaction derived from humor may be positive or negative, contributing to workers' mental health. In other words, people are more likely to find a satisfying situation when they are in a positive mood. Satisfaction results from a comparison between what concerns an action potential and events that occur in reality. The contrast model explains that job satisfaction is a summary or global reaction to different field components. However, it is necessary to clarify that a model cannot supplant another. These two are complementary, and both are necessary to explain complex situations. (Saridakis et al.2020)

3. Methodology

This study investigated the perception of nursing work environment on nurses' job outcomes working at primary health care centers in Jeddah City, Saudi Arabia. A descriptive correlational cross-sectional design was employed. A questionnaire approach was used to collect the data from the nursing staff working at three primary health care centers in Jeddah. A non-probability convenience sampling method was adapted to recruit the participants. The Revised Nurse Working Index (NWI-R) survey was used to describe the nursing work environment and its impact on job outcomes. This survey was also used to measure job outcomes including job satisfaction, intention to leave, and quality of nursing care. The questionnaire included 53 items. The questionnaires comprised three sections; the first section included eight questions regarding socio-demographic characteristic, the second section included 24 questions incorporated based on the Revised Nurse Working Index (NWI-R) to measure the perception of nursing work environment, and the third section incorporated three questions to measure job outcomes on patients provided by nurses at primary health care centers. The data was analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were used to examine the frequencies and percentages for categorical variables, while the mean and standard deviation were used to measure continuous variables. Moreover, inferential statistics were used in the analysis such as the independent t-test and one-way ANOVA test.

Application to Practice The majority of staff nurses are dissatisfied with their jobs. Nurse job satisfaction is a strong predictor of organizational commitment, retention and turnover. Furthermore, nurse job satisfaction is a significant variable that influences not just nurses'

perceptions, attitudes, and behaviours, but also the efficiency and quality of nursing care given to patients, and subsequently the success of health care organizations. Treatments to raise job satisfaction are to consider the various attributes related to the content of the job, the work environment, economic rewards, professional growth and improved non-material benefits. In the significant services environment of primary care centers, enhancing job satisfaction and high-quality nursing care for patient satisfaction is particularly important (M. Nelson, 2011).

3.1. Research Design

Thirty years of research on burnout and nurse work environment add to a clear understanding and considerable insight into the psychosocial work environment of nurses (Van Bogaert et al., 2017). Therefore, it is necessary to conceptualize both independent and mediating variables more broadly and in accordance with a theoretical and empirical background. Educational background, years of work experience, institution level and ownership type are used as independent variables. Workload, resources for care, control over practice, teamwork, organization of care and morale of colleagues are used as mediated variables affecting job satisfaction (M. Nelson, 2011). Conceptualizing predictors of burnout as job demands, control and social support is suggested, after which an exploratory model of the effects of nurse practice environment on burnout and nurse-reported job outcomes and nurse-assessed quality of care is presented. Finally, it is attempted to broaden the current understanding of the effects of nurse practice environment on nurse-reported job outcomes and patient assessments of quality of care, as well as to mediating mechanisms underlying these effects.

Regarding mediating mechanisms, plants and corresponding indicators rather than latent mediating constructs are examined. Because measurement error may be transferred from mediating variables to dependent variables, it is more appropriate to treat mediating variables as single indicators. Although some degree of parsimony is inevitably lost, spurious results arising from modeling measurement error need to be avoided. Between 2004 and 2007, a large number of public and private hospitals operating in Turkey participated in a detailed survey research on working conditions and health problems of healthcare personnel. Deploying a national representative sample and multilevel methodology and multilevel modeling, this study is designed to identify the effects of the psychosocial and organizational aspects of the nurse work environment on diverse job outcomes and quality of care of a common healthcare workforce in Turkey.

3.2. Data Collection Methods

This study examined the relationships between the work environment on nurses' satisfaction and perceptions of the quality of care provided to patients. Nursing shortage, inadequate staffing, work overload, external pressure and low job satisfaction are all challenges facing workers in the health care sector. Therefore, it is beneficial to address the impact of the work environment on job satisfaction and quality of care from the perspective of nurses (Havaei et al., 2022). This cross-sectional study was conducted at 11 hospitals with 1652 nurses. Descriptive statistics, chi-square test, t-test, ANOVA test, Pearson correlation, multiple regression and path analysis were used in the data analysis stage. The results showed that there was a significant positive correlation between perceived work environment, satisfaction with nursing job and quality of care. The results

of the regression analysis also showed that perceived work environment and satisfaction with nursing job significantly and positively predict the quality of care and satisfaction with nursing job significantly and positively mediate the relationship between the perceived work environment and quality of care. Path analysis results supported the proposed mediation model and indicated that a perceived work environment and satisfaction with nursing job have a significant impact on the quality of care (Maria Norman & Strømseng Sjetne, 2017).

3.3. Data Analysis Techniques

The first objective was to compare the perceived quality of the work environment and the level of distress due to work environment stressors between registered and licensed practical nurses in nursing units with the highest and lowest quality differences. Additionally, the relationships among perceptions of work environment work environment stressors, and the quality of care provided to patients were examined. The implications for health care management and future research are discussed.

Unless incurred due to ineffective staffing, accommodations of issues related to stress problems in healthcare organizations are expensive. For this reason, it is important to establish whether the occurrence of unfavorable events or conditions that cause nurse distress, and from which the focus of this study arises, can be minimized in an equally cost effective manner.

Specific stressful events or conditions in work environments, sourced from the organization and its employees, negatively influence perceptions of work environments, importance of work, dispensing of care, and quality of care to recipients. Nurses' lowered evaluations of the quality of staffing support, peers, and possessions at their places of employment contribute to heightened distress due to stressful work environments. In addition, lowered perceptions of the accuracy and practice of care decisions made by healthcare professionals, as well as a greater apprehension for patient safety, further reduce quality evaluations (Gabriel, 2013).

4. Work Environment Factors

In the most recent years, the focus on the work environment in which nurses are required to provide care to their patients has grown dramatically. A number of studies has been published with regard to the nurse friendly work environment and to the impact that care environments have on the resolution of nursing care outcomes, patient welfare and satisfaction, the satisfaction of the nurses and their retention. Besides numerous predictions regarding the expected nursing shortage, especially caring nurses, the literature includes descriptions of the "shortage of reasons to stay". Much of this research outlines the role of the nursing profession, conditions in the work environment in which nursing care occurs, and the socioeconomic conditions that influence the quality of nursing work life.

The primary interest of nurses' work on the characteristics of the work environment is due to the fact that, along with general patient variables related to patient's health quality and complexity, the work environment represents the one variable over which the clinical nurse has the greatest control. That is the reason why daily the healthcare institutions are growing interest in understanding and altering such work characteristics that can help the nurses in resolving the nursing care outcome. This wasn't always the case; nursing care quality

problems still weren't faced seriously from the standpoint of the nursing care work environment, but rather are attributed to the individual competitors, especially the clinicians (Wei et al., 2018).

4.1. Physical Environment

Balancing patient care needs and collaborating with other health care professionals is particularly essential during the covid-19 pandemic, as it forces health care workers to constantly modify their practices, routines and work contexts. However, the ability to provide responsive care is strongly affected by the safety and quality of the work processes that underpin it. There are many workplace factors that impact work processes and consequently patient outcomes, but many of these can be predicted by health care workers themselves. A qualitative analysis found that nurses' reports of healthier workplaces, particularly workload management, psychological protection, physical safety and engagement were associated with higher ratings of quality and safe patient care (Havaei et al., 2022). The physical environment plays a pivotal role in both nurse satisfaction and quality of care provided to patients. However, there is limited research exploring the factors in the physical environment that significantly impact nurses' satisfaction with their organization and the quality of care they provide to patients. With new record keeping software and complex care practices, the design of workstations, traffic flow and the availability of equipment, as well as the availability of suitable quiet and private spaces for direct patient-care activities are central to safe, efficient, and effective work practices.

4.2. Organizational Culture

Nurses experience the organization in the context of the work environment, which underlines the importance of understanding the relationship between the nurses and the work environment. Therefore, the goal of this study is to examine the impact of the work environment on nurses' satisfaction, turnover intention, and the quality of care provided to patients. This study implements an organizational behavior framework to describe nurses' responses to the work environment, including organizational culture, organizational climate, and the psychological empowerment of the work environment (Tsai, 2011). Nurses are the frontline providers of health services and their jobs are physiologically and psychologically demanding. The caregiver role requires that nurses' work be timely and patient-oriented and that they must possess expertise in nursing and problem solving. Nurses' work is also knowledge intensive and requires the ability to learn and use new and specialized information. Teamwork among staff is shown to contribute to a greater sense of job satisfaction in work. Job stress results from dissatisfaction with the job, leads to high rates of burnout, and has a critical impact on the turnover intentions of nurses. Work recognition and job satisfaction can be achieved when employees can complete the tasks assigned to them by the organization. However, the decrease in quality of patient care has raised concerns and prompted a review of health care organizational practices in hospitals. A hospital provides various services and treatments for patients, but the quality of care derives predominantly from nursing care. Together, nurses are the key point between treatment and patients. Hence, hospitals must provide a comfortable work environment for nurses in order to improve the quality of patient care. Finally, nurses' work environments are hypothesized to have an effect on the overall quality of patient care.

4.3. Workload and Staffing

Care is the core of the nursing profession, and it requires both care by nurses and caring within a care environment. High quality nursing care means accessible care by competent qualified nurses, showing care in a sensitive manner. Care is one of the main functions and responsibilities of nurses. The maintenance and improvement of the quality of nursing care is the most important challenge for health care systems. Nevertheless, it is usually regarded as a 'black box' and not evaluated. The first step in improving the quality of nursing care is to evaluate it. In order to do that, the quality of the nursing care should be analyzed by using certain criteria or indicators. This usually corresponds to perception of patients or nurses. By contrast, the quality of the care that nurses provide and the impact on them of the care environment are rarely investigated. The nursing care environment is an extremely critical factor in terms of the quality of the care provided, and it has become progressively more important as the nature of the nursing profession has transformed from a vocational and technical focus to one concentrating on nursing science (Maghsoud et al., 2022). The nursing care environment can be defined as factors promoting or impeding the health care of a patient in a clinical setting. The nursing care environment consists of the spatial structure, the size, the configuration, the noise level, the lighting, the resources, the accessibility of the resources, the information technology, the climate, the workplace safety, and the hygiene. The nursing care environment indirectly affects the quality of the care that nurses provide to patients. It influences the behaviors and practices of the patients, the nurses, and other health workers. By promoting patient satisfaction, it can also increase the quality of the care provided. In a positive care environment, nurses have more time to spend with patients. They are better able to consult with other medical staff, and they have better communication with patients and their families. They are also more likely to have access to information through improved information technology services (Maria Pia Ferramosca et al., 2023).

5. Nurses' Satisfaction

Work environment is considered one of the most important predictors of nurses' job satisfaction. Infections or occupational depression can be mentioned as examples of the negative results of this state of affairs. Among the factors contributing to the fact that the work environment is not good, in addition to low wages, include inappropriate working conditions, lack of respect for the profession itself, lack of the employer's support, lack of personnel, which leads to low efficiency of activities and excessive workload. The principle of universality in care favors illusion and misconception that good care is only about patients' health and life. Often, basic needs and feelings are forgotten in patients who, for health reasons, are in difficult situations. In turn, job satisfaction, often equated with job satisfaction, can be defined as a pleasant or positive emotional state resulting from an appraisal of one's job. Lack of job satisfaction among nurses contributes to the fact that the services they provide are not carried out at the level that should result from the good of the patient. This, in turn, can directly or indirectly affect the low evaluation of services by patients. (Al-Haroon and Al-Qahtani2020)

In the research group, it seems that it is similar to a group that feels the greatest shares of labor insecurity, such groups act excessively acquire energy in professional life, tend to societal activity enter intensively, strongly criticize work performed by others, and has the highest tendency to engage in project treatment. The great share of nurses in the

mentioned group conditions, the other step goal of the project assumed to be presented relates the analysis of the nurses' professional, satisfaction is experienced by representatives of referred profession and in the environment in which they find themselves employed of. The impact of the thesis with this project is not intended to present individual sense of satisfaction with the work in the professional group of nurses, but to signal, according to their own opinion, legally significant areas of professional activity that may condition job satisfaction for nurses or factual whether the reasons for this satisfaction refer to job or lamentation of its lack (Tomaszewska et al., 2024).

5.1. Definition and Measurement

Nurses' work environment has for long been shown to be associated with quality of care and organizational outcomes, and the demand for validated questionnaires with which to assess it has increased. A scientific and practical base for the measurement of nurses' perception of work environment pertains to a better comprehension of the concept as well as to an improved design for interventions to improve it. Work environment is a multi-dimensional concept consisting of the physical, psycho-social, and organizational working conditions of a job. Developments of new methodological approaches have increased precision in measuring psychologists' perception of own occupational environment. The aim of this paper is to review the literature for assessed survey questionnaires that measure nurses' perception of their work environment, make a brief assessment of their validity, and map the content domains included in a selection of questionnaires. A systematic review was conducted to compare and evaluate work environment questionnaires designed for registered nurses. Thirty-eight different questionnaires were identified in the review with 16 measurement dimensions (Maria Norman & Strømseng Sjetne, 2017).

High reliability and strong content validity was found in the psychometric properties of two internationally established questionnaires for the assessment of work environment. These questionnaires are the 'Practice Environment Scale of the Nursing Work Index' and the 'Revised Nursing Work Index'. While many instruments focus on work environment in general, the three most established questionnaires for the measurement of nurses' perception of their work environment were found to focus on only a few aspects of work environment and overlooking others. The mapping the questionnaires by their content domains facilitate the choice of instrument according to the purpose of assessment. Further, the understanding of how certain aspects of work environment are interconnected and how some are usually not assessed at the same time might guide the design of questionnaires surveying the work environment in a more comprehensive manner.

5.2. Factors Influencing Nurses' Satisfaction

Nurses play an important role in providing healthcare services and a safe care environment. Since their motivation and commitment directly affect the provided treatment and care, it is essential to investigate the factors influencing their satisfaction. Job satisfaction is becoming an increasingly significant problem in the healthcare sector. The job satisfaction of medical personnel is related to the level of stress, burnout, and intention to leave the profession. Nurses' working conditions and nurses' job satisfaction have indicated that unsatisfactory working conditions adversely affect job satisfaction. Nurses provide most of the direct care services during the hospital stay. Therefore, it is essential to have satisfied and competent nurses to ensure high-quality care. Nurses work under stressful conditions

such as increased workload, working time, and long working hours. The professional and personal experiences of nurses are also challenging. All the factors mentioned above result in excessive stress for nurses and negatively affect nursing practices. Therefore, it is vital to understand the determinants of job satisfaction for nurses, as much nursing care is being provided during hospitalization. (Koch et al.2020)

Job satisfaction was assessed using a questionnaire to cover aspects such as general job satisfaction, pay, the physical environment, work organization and conditions, the opportunities for advancement and promotion, security, and the social component. The job satisfaction observed was considered as the result of the perception of the need that the job met, and the evaluation of the need satisfaction perceived to be met by the job. Job satisfaction is associated with lower levels of absenteeism as the nurse is comfortable and satisfied. Recreation and leisure activity help to beat the job's stress and thus enhance the job satisfaction of the nurses. The satisfaction derived from recreational and leisure activities was determined to have affected the nurses' job satisfaction, and this method can be further employed to prevent job turnover by increasing job satisfaction (Tomaszewska et al., 2024). Similarly, increased psychological stress for these reasons causes dissatisfaction in the profession.

6. Quality of Care

In June, a British report revealed that 20% of nurses have indicated that their work environment has an impact on their satisfaction. This figure rises to nearly 50% among NHS nurses in England. There is a significant relationship between the work environment and the quality of care provided by the nurses to the patients. There is also a significant relationship between the work environment of the nurses and the level of satisfaction of the patients with the care provided. In this context, nursing and patient care are important to manage this key work environment.

After conducting all analyses, machine learning predictive models using the Random Forests, and the Extreme Gradient Boosting algorithms were developed to identify predictors of the quality and safe care delivery. These predictive models may be used by nurse managers and hospital administrators to identify the workplace areas of improvement where, if better controlled could lead to better quality of care. The predictive models showed that, overall, nurses' reports of healthier work environments, particularly those of four areas including workload management ($\rho = 0.41$), psychological protection ($\rho = 0.40$), physical safety ($\rho = 0.38$), and engagement ($\rho = 0.21$), were associated with higher ratings of quality and safe patient care delivery (Havaei et al., 2022).

6.1. Definition and Dimensions

As nurses are the most numerous group of healthcare workers and play a critical role in delivering nursing care, the work environment should be an important area of concern. Further, the nurses' work environment has been shown to be associated with quality of care and organizational outcomes. As policy makers, nurse leaders, health care leaders, and patients are increasingly focused on addressing gatekeeping factors affecting the quality and efficiency of nursing work, it will be useful for all stakeholders to know what questionnaires are used to assess or evaluate conditions for delivering nursing care. A literature search was conducted, which covers the databases Ovid MEDLINE, Ovid Embase, Ovid PsycINFO, Cumulative Index to Nursing and Allied Health Literature

(CINAHL). Search terms were a combination of nursing, questionnaire development, psychometrics, and work environment, questionnaire, survey(s), psychometric property, work condition(s), content validity, or the healthcare version of the instrument. In addition, a hand search was performed referencing the tracking of the identified articles. The measured questionnaires regularly evaluate only 2 of 7 domains that are healthcare-specific. Among the 24 selected questionnaires, 36 common topics are presented in 5 domains. The most common content domain covered is design and function (20/24), while the least common is professional practice and growth (5/24). Some questionnaires have similar content because they are derived from the same original questionnaire (Maria Norman & Strømseng Sjetne, 2017).

6.2. Measuring Quality of Care

Quality of nursing care, patient safety, and employees' likelihood to recommend hospital care and employment were examined as outputs. These 3 outcomes were derived from a 12-country survey study using a multinomial logistic regression. As well as providing a statistical model, the study also implements machine learning techniques and compares their performances with existing models. Among classifiers, the neural network, Adaboost, and Logistic Boosting performed similarly. Other models including decision tree, threshold-calibrated and uncalibrated SVMs, and L1-regularized logistic regression performed worse than existing models. The 3 outcomes examined in the analysis were derived from a 12-country survey study representing 25,504 Canadian RNs, aides, and patients in 617 wards, as part of the RN4CAST (Havaei et al., 2022). These 3 outcomes were quality of nursing care, patient safety, and employees' likelihood to recommend the workplace to family and friends for employment.

Quality of nursing care was measured by the mean of 2 questions that asked participants for the general and the last shift quality of nursing care delivered in their primary workplace. Responses to questions were in a 4-point scale where higher values indicated better care. Patient safety was measured using a single question that asked participants to give their workplace a grade on patient safety. Responses to this question were in a 1–10 scale where higher values indicated better patient safety. Employees' probability to recommend was captured via 2 questions where participants were asked to signify the likelihood (very low, low, high, very high) that they would recommend their hospital for care and their ward for work to their family and friends, and to their colleagues. In analysis, these 2 questions were treated as a single multinomial output that had 5 possible values.

7. Relationship Between Work Environment, Nurses' Satisfaction, and Quality of Care

The working conditions in hospitals have a significant impact on nurses' satisfaction and the quality of care provided to patients. A good work environment has been considered as a factor that can improve the quality of patient care. A hospital can be successful in providing high-quality care when nurses work in a suitable and effective working environment and are fully satisfied with their work, and the quality of patient care increases when patients are satisfied with the care they receive. The working conditions in hospitals can affect the overall hospital organization and the care provided to patients, as well as the attitudes and behavior of the care providers, i.e., the nurses. Nurses are a key unit in any hospital and their work environment has a direct effect on the quality of care provided to

patients (Kvist et al., 2014). According to previous research, reasonable working conditions and high job satisfaction of hospital staff positively affect patient satisfaction and the quality of care provided. Positive feedback from staff and a good hospital image, on the other hand, positively affect the recruitment of new staff, strengthen their satisfaction, and increase their working motivation. This reflects on the increase in the quality of nursing care and patient satisfaction. The quality of patient care is directly related to the nursing work environment. As the work environment is improved, the quality of patient care increases (A. Abdou et al., 2019). However, it is difficult to expect improvement in nursing performance and higher quality care just by providing more human and economic resources. Kitson suggests that it is important to create an effective work environment, and that if nurses' work is organized in a suitable environment, they are expected to work more responsibly, reflecting a positive image and pride in their work.

7.1. Theoretical Linkages

Nurses are essential in delivering high-quality care. They are the health care providers who are most frequently in contact with patients and their family members. The environment in which nurses accomplish their work is suggested to be strongly associated with (1) nurses' outcomes, such as work engagement, job satisfaction, turnover and intention to leave, burnout, and safety perceptions; and (2) outcomes regarding patient care (nurses', other providers', and patients' ratings of the quality of care, in-hospital infections, the incidence of inpatient falls, and the occurrence of pressure ulcers). Positive nurse practice environments lead to better outcomes for both nurses and patients. Such environments include supportive organizational management as well as adequately staffed clinical care programs. A favorable practice environment might be instrumental in enticing committed and devoted nurses who actively render high-quality, safe, and effective patient care. Accordingly, nurses may be interested in both the work environment in which they are operating (to maintain or improve such an environment) and their own personal accomplishment at work. As a consequence, the impact of nurse practice environments on nurses' work engagement and job satisfaction, as well as on the quality of care rendered to patients by nurses, is of importance to hospital management and belongs at the core of investigations in health services research (Van Bogaert et al., 2014).

7.2. Empirical Evidence

The Importance of the Work Environment and Care Delivery: Nurses in the US are responsible for a significant portion of patient outcomes, reflecting their responsibility for working in a complex and dynamic environment. The importance of ensuring a conducive environment has been shown to be significantly related to outcomes at the national level, where poor perceptions of one's work environment caused higher mortality rates (Havaei et al., 2022). Both studies highlighted the important role of the work environment for mediating nurse practices and care quality.

Empirical Evidence: Findings suggest that level of empowerment and nursing unit influence ER nursing perceptions of the work environment qualities that significantly relate to quality of care by unit type. Nurses are a critical element in healthcare; their care is directly related to patient outcomes. Nurses' reports of healthier workplaces, particularly regarding workload management, psychological protection, physical safety and engagement, were associated with higher ratings of quality and safe patient care. Little

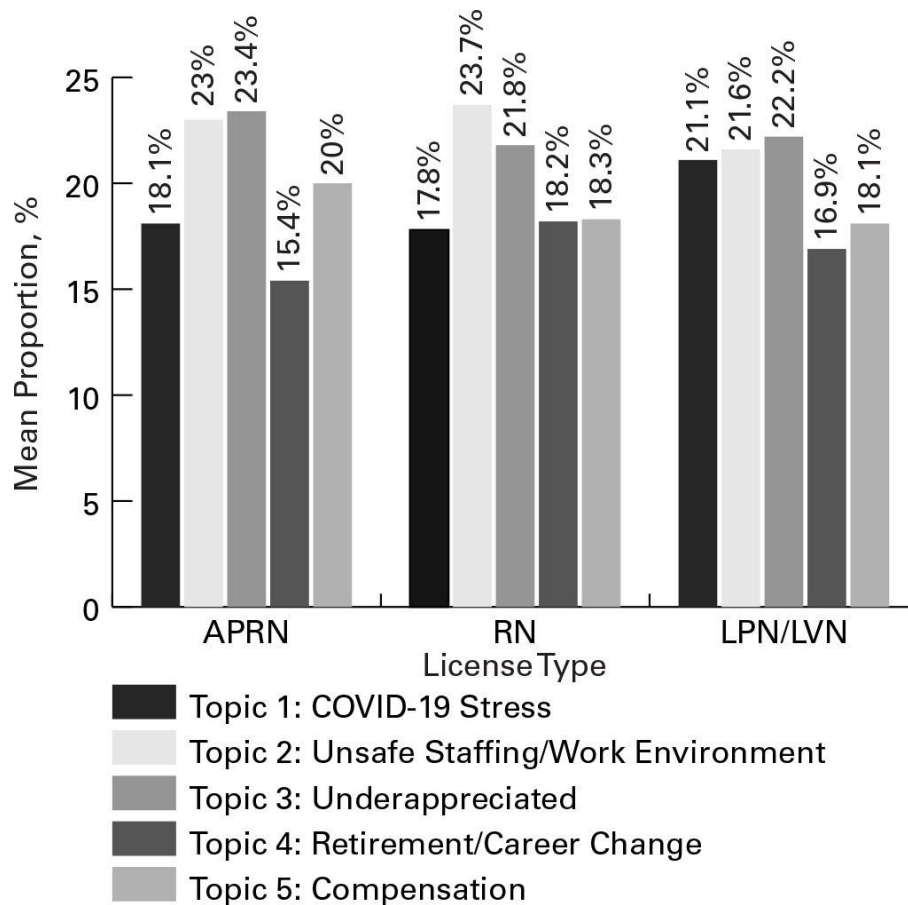
empirical evidence has been investigated in the association among nurse empowerment, structural empowerment, the work environment, patient satisfaction, and job satisfaction influencing organizational and patient outcomes. In order to manage the empowerment of nurses in nursing work settings, it is critical to know their levels of empowerment and the perceived elements that affect how nurses assess their work environment (J. Willis, 2015). Furthermore, improved nursing empowerment works in accordance with the World Health Organization to enhance global, interprofessional education and cooperation within the RN work environment and results in higher satisfaction and specialist job satisfaction. However, in an increasingly money-oriented aggressive and pricey healthcare environment, enhancing the work environment can have beneficial implications not just for improving the attractiveness of the job but also for saving significant resources on personnel retention and patient outcomes.

8. Interventions and Strategies

The work environment is a network of both physical and social dimensions, which collectively lay an impact on human behavior and work practices. To establish and sustain a healthy work environment, six healthy work environment standards are proposed: a) Skilled communication, b) True collaboration, c) Effective decision-Making, d) Appropriate staffing, e) Meaningful recognition, and f) Authentic leadership. These standards provide a framework for healthcare organizations to support nurses and promote patient care outcomes. To embrace and cultivate a caring culture, it is suggested that healthcare organizations shall encourage caring practices as a part of the nursing profession. Caring practices can enhance a caring culture and provide a platform for nurse work engagement. Nurses tend to be more satisfied with fair treatment and workplace communication when caring practices are employed in their organizations. By integrating caring practices into their work routines, nurse managers can enhance the caring culture of healthcare organizations. (Borkowski & Meese, 2021)

Being frontline healthcare providers, nurses are in a key position to build and sustain a healthy work environment. However, nurses are subject to high work demands, which can cause fatigue, burnout, and even compromised patient care outcomes. Healthcare organizations shall foster a culture of care, support, and understanding for nurses and organizational justice falls on the employee's sense of being understood, appreciated, and supported by their organizations.

Nurse leaders are pivotal to promoting nurse performance, patient care quality, and a healthy work environment. Their leadership behaviors directly impact the work environment. Nurse leaders shall cultivate a healthy view of work and life balance and provide nursing staff with opportunities for professional development and a healthy work culture. Economically speaking, medical institutions must generate adequate nurse staffing. Safe assignments, better staffing ratios and subjective workload optimization are essential to motivate nurses and to guarantee good patient care and treatment.



8.1. Improving Work Environment

Nurses are the largest sector of healthcare workers, and their work environments have significant effects on their job satisfaction, as well as on the quality of care provided to patients and their satisfaction. Therefore, nurse managers need to contain the physical and organizational factors of the work environment that improve the efficiency of nurses, the quality of their work, and the outcomes of patients. The overall aim is to improve nurses' satisfaction, promote nurses' health, retain those staff, and also enhance the quality of patient care. Following this purpose, the nurse managers who are working in hospitals or healthcare centers should consider relatively simple, cost-effective interventions such as improving work conditions, organizing educational programs, establishing guidelines, and providing additional patient care resources. Consequently, it would further motivate nurses to work effectively, experience healthy interactions, and in the long term, fulfill the needs of nursing staff. Implications for Further Research are also discussed.

Healthy work environments were positively associated with nurses' psychological health and negatively correlated with nurses' emotional strains. Nurses' workload, stress levels, and caring behaviors as potential predictors were mentioned. Workload was considered as a significant stressor to nurses affecting nursing care and quality of life. Shift length was associated with nurses' satisfaction with hours and job dissatisfaction. When they were satisfied with hours, nurses experienced positive feelings about their work life, and overall job satisfaction rates increased. A statistically significant association was identified

between quality of patient care and units in which nurses took care of more patients (Wei et al., 2018).

8.2. Enhancing Nurses' Satisfaction

Work environment is a well-known predictor of nurses' job satisfaction. Nurses are on the front lines of healthcare, providing a large portion of patient care. Lack of professional autonomy, workload, and wages are significant sources of dissatisfaction. Reasons for leaving the profession include heavy workloads, lack of recognition, and respect from doctors and colleagues. Nurses complain about low payment for the amount of work. A positive practice environment has been shown to promote good job satisfaction. Inadequate staffing is a risk factor for job dissatisfaction (Tomaszewska et al., 2024). Inadequate infrastructure, lack of basic equipment for patient care, and inadequate staffing levels may affect patient safety. Influencing factors can play a role in improving job satisfaction may have the potential for nurses to increase the quality of care demanded by patients. A sound work environment is the most important factor affecting and meeting the expectations of nurses. The importance of measuring job satisfaction is that improving job satisfaction is necessary to enhance and maintain healthcare professionals' activities and training. Therefore, it is advisable to cultivate and maintain appropriate work environments in healthcare organizations (J. Willis, 2015).

The lack of job satisfaction among nurses can affect the quality of care they provide, which can directly or indirectly affect patient satisfaction. The view of nursing as a profession has changed, although much of this is driven by industrial and economic considerations and not necessarily by the high ideals for the workforce's satisfaction and commitment. In most developing countries, working conditions in hospitals are less than optimal. The lack of job satisfaction can have an adverse effect on the quality of care. Anxiety can increase and inattentiveness to the care of the sick. By contrast, a high level of job satisfaction and professional commitment can boost work zeal and this can lead to an increase in performance. The primarily beneficial effect of job satisfaction is to increase an individual's self-confidence. Therefore, persons who are pleased with their work can develop a confident approach to their job and it is agreed that higher self-confidence can improve the professional work. In addition, sound human relations in nursing work are important to sustaining satisfaction. Nurses in departments with professional assistance experience significantly higher job satisfaction. A friendly workplace and the image/status of a good working environment at the department have an effect. Busy schedules and high workloads in their workplace are related to job dissatisfaction. How nurses accept their profession may affect occupational pleasure. Such factors that may affect job satisfaction need to be studied and considered to open policies that aim to increase the quality of healthcare.

8.3. Promoting Quality of Care

Background: Research has shown that there are many different factors that can impact the quality of care a nurse provides until satisfactory levels. One of the predominant factors is the work environment of nursing. Literature confirms that the work environment of nursing has an impact on job satisfaction, as well as the quality of the care received by patients. When nurses have the tools they need and the autonomy and authority to act, that their competence is recognized, and that their contributions to quality patient care for the patient

are valued, it is predicted that they will report higher categorizations of patient care quality and patients will report higher ratings. Some studies indicate that aspects of professional work environment are linked to the performance of the hospital and quality of care. Nurses state that the work environments are not conducting patients well (Havaei et al., 2022).

Research has established an association between work environment and both staff satisfaction and patient satisfaction, and more recent evidence suggests that work environment may be a determinant of performance and care quality, as measured by overall mortality and a range of other care performance standards. Research that analyses the linkage and process by which particular elements of the work surroundings, or interventions to develop it can independently lead to enhancing patient-based results would benefit practitioners, policy-makers, the public, and potential researchers. There is a wide research on the connection between patient quality care results and particular elements of the nursing work environment. A vital learning database comprising healthcare workforce information, healthcare results data, and nursing atmospheres is translated into several methodological models. A demand happens for modeling that measures the effect of work surroundings on results or satisfaction. This researches the patient outcomes-based results using a detailed national cross-sectional study of English acute hospital results related to the performance of complaints from a group-wide health facility employment study.

9. Conclusion and Future Directions

High-quality nursing care is provided by highly satisfied nurses who work in supportive work environments. The emphasis on quality, highly effective healthcare was stemmed from the 2000 report entitled "To Err is Human." While the report underscored the alarming number of annual patient deaths due to medical errors, the follow-up report, "Crossing the Quality Chasm," highlighted the necessity to assess and promote the quality of medical care. Shifts in healthcare and the neediness to assess and report nurse-provided medical care quality data on shifts in emergency department and sentinel event policy, public healthcare reporting, and the ushering of nurse value-based purchasing programs. Consequently, nurses and the work environments into which they are placed are a significant focus of value-based purchasing indicators and other quality measures. Despite the various definitions and types of work environments, recent understandings focus on the physical, organizational, and socially supportive structures made available to healthcare providers. Ideal work environments promote exceptional professional nursing training; emphasize comprehensive and patient-focused care; further patient-healthcare provider collaborations; guarantee provider safety, satisfaction, and the wellbeing; and foster worker growth and advancement. Suboptimal work environments consist of insufficient and overworked staff; reduce valued-added healthcare activities, foster horizontal hostility and other deleterious social relations; overlook employee safety, satisfaction, and the wellbeing; and provide few chances for growth (Wei et al., 2018).

9.1. Summary of Findings

The capability of a nurse to give quality care to patients depends on a mutually friendly work environment. This means the provision of quality care has to begin with the creation of a friendly work environment. To maximize patient satisfaction, a good work environment is required where there is conducive, comfortable and good support between the medical staffs. Since nurses play a vital role in the care of hospitalised patients, they

must be happy and satisfied with their work (Wei et al., 2018). As the nurses will get increasing job satisfaction, the quality of care will automatically increase. As a result, nurses' job satisfaction must be a focus for health managers. The ultimate goal is to meet the increasing needs and expectations of the patients. To this benchmark, the importance of the places where the patients are given healthcare is paramount. The places where the patients are given healthcare must be satisfying for both the patient and the service provider. If the staff provide service in a satisfied work environment, this will reflect positively on the service provided to the patient and will also be effective in increasing patient satisfaction as a natural result.

9.2. Implications for Practice

The degree of satisfaction of nurses with their work is not only due to the conditions of the professionals, but is especially linked to the circumstances that make up the field in which the work is carried out. This research aims to understand the environment of the professional practice of nurses in its three components: the structure, process, and outcome. A further goal is to determine the relationship of the environments of professional nursing practice, the quality of care, and its components with the job satisfaction of nurses (Maria Pimenta Lopes Ribeiro et al., 2022). In the long run, these objectives converge on the possibility of formulating more effective strategies regarding the optimisation of the environment conducive to professional practice, with repercussions on the satisfaction of the nurses and the care they provide.

The researchers found that in the structure of the environment analysis the Mean Percentage (MP) value of the sub-components showed that two of these sub-scales, "facilities" and "nursing staff" registered percentage values between 71 and 74.99% and one, "exposures to treatments/interventions" between 68 and 70.99%, all of which are compatible with a favourable evaluation. As to the process of the environment analysis, in the last critical period, the MP values of the sub-scales were all below 67%, all indicating a less favourable evaluation. In the outcome of the environment analysis, for all critical periods, the MP value of the sub-scale was below 67%, which indicates a tolerable evaluation, since, according to the average percentage standardization, the cut-off point is located around 66%. Out of all the seven sub-components that make up this structure, this sub-scales sought to evaluate the presence of internal familiarity with the culture and expectations of the center, both of nurses and patients, as well as the presence of a training program.

9.3. Recommendations for Future Research

This systematic review aimed to summarize the relationships between the effect of nurse work environments and outcomes, as well as to identify the knowledge gaps for future studies. In this review, nurse work environments were defined as organizational, management, and social-contextual factors that affect the work setting and nursing practice (Wei et al., 2018). Besides the work itself, the environment surrounds nurses closely on a daily basis. Understanding the positive and negative features of nurse work environments are invaluable for policymakers and healthcare managers because improving the quality of nurse work environments results in better health care services and patient outcomes. There were four research questions addressed. The first one was how nurse work environments are operationalized, measured, and evaluated. The second question was about the

relationships between nurse work environments and nurses' outcomes. The third research question was about the relationships between nurse work environments and external factors. The last research question was about the relationships between nurse leadership, work environments, and patient care quality. To consolidate the findings of descriptive studies accurately, this review only presented the measures for nurse work environments and other main variables, and the information about the studies' characteristics and effects was included in Supplementary Tables. In addition, this review only included studies conducting in the US.

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