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The Impact of COVID-19 on Nurses' Perceptions of the Healthcare Work Environment

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Introduction: Healthcare workers, including nurses, play a crucial role in responding to the pandemic and are on the frontline of exposure to infection. Historically, professional nurses bring compassionate, competent care to the pandemic response but are challenged to provide care when their work puts them at increased risk. Aim: The current study assessed the nurses' work environment during the COVID-19 pandemic.

Methods: A quantitative design was utilized. A sample of 144 nurses from a specialized cancer center and a university hospital in Jordan was recruited. The American Association of Critical-Care Nurses' Healthy Work Environment Assessment (HWE) Tool was used in this study.

Results: Sixty-six percent of the participants worked in the cancer center, and 63.9% worked in inpatient units. Most participants (76.4%) did not attend infection control courses. Nurses scored effective decision-making as the highest standard (mean = 2.48, SD = 0.9) across all HWE subscales. Nurses working in the cancer center ranked their work environment in all HWE subscales higher than the work environment in the teaching hospital.

Conclusion: The results of this study were utilized to identify areas for improvement regarding the nurses' work environment during the COVID-19 pandemic.

Introduction

The emergence of the novel coronavirus, SARS-CoV-2, in late 2019 and its subsequent global spread as COVID-19 marked a pivotal moment in contemporary healthcare history. This pandemic, more deadly than its predecessors, SARS and MERS, has not only posed a significant threat to public health but has also placed an unprecedented burden on healthcare professionals worldwide [1-3]. Among these professionals, nurses, as frontline caregivers, have been particularly affected by the challenges brought forth by COVID-19. As of mid-August 2020, the World Health Organization (WHO) has reported nearly 770 million confirmed cases of COVID-19 and almost 7 million deaths globally [4]. While the acute impact of the virus is undeniable, its long-term repercussions on health and healthcare systems continue to emerge. Exploring how nurses perceive their work environment amidst the ongoing pandemic becomes essential in this context.

This study aims to investigate the impact of COVID-19 on nurses' perceptions of the healthcarework environment, with a specific focus on Jordan. Understanding how the pandemic has influenced their daily routines, safety concerns, and overall job satisfaction is crucial. By shedding light on these aspects, we hope to contribute valuable insights that can inform strategies for improving the well-being and effectiveness of healthcare professionals during public health crises. By exploring the experiences and perspectives of nurses in Jordan, we seek to bridge the existing knowledge gap and provide practical recommendations for healthcare policymakers and institutions. In doing so, we aspire to contribute to the broader conversation on pandemic

preparedness and support for frontline healthcare workers.

COVID-19 and the Healthcare Work Setting

A healthy work environment in healthcare is characterized by safety, empowerment, and job satisfaction. Within the nursing context, it represents a setting where staff nurses, junior nurses, and leaders collaborate with professionalism, accountability, contribution, and transparency. The significance of prioritizing the nurses' work environment gained prominence with the publication of "Keeping Patients Safe: Transforming the Work Environment of Nurses" by the (Institute of Medicine (IOM), 2004) [5]. This seminal work revealed that inadequate management practices, staffing issues, and disciplinary cultures in many healthcare settings compromised patient safety. Numerous studies have since established the connection between healthy work environments, patient outcomes, and nurse retention.

Detachment of bedside nurses has been identified as a significant factor that contributes to early turnover in practice. Nurse managers must address this issue by providing opportunities for professional development, ensuring adequate staffing levels, and promoting collaboration [6]. Failure to do so can result in clinical nurses becoming disheartened and detached from their work, ultimately affecting patient care [7, 8]. The advent of the COVID-19 pandemic posed a profound and ongoing challenge to maintaining a healthy work environment across healthcare settings worldwide, particularly those treating severely ill patients. Healthcare workers, including nurses, found themselves on the front lines of exposure to infection. A study by White et al. assessed the experiences of frontline nurses during the pandemic, revealing that nurses faced exhaustion due to increased workloads, staffing shortages, and the emotional burden of caring for isolated and severely ill patients. Concerns about professional, ethical, and legal protection when providing care in high-risk situations also weighed heavily on nurses [9].

In the context of Jordan, a study on nurses' ethics during the COVID-19 pandemic demonstrated their unwavering commitment to caring for patients, even in the face of unprecedented challenges [10]. The pandemic fundamentally transformed the way nurses deliver care, emphasizing the importance of communication in patient satisfaction and overall healthcare quality. According to the American Association of Critical-Care Nurses (AACN), proficient communication skills are as vital as clinical skills. Effective teamwork and collaboration between healthcare professionals, including physicians and nurses, became even more crucial in the face of the pandemic's demands [11]. Despite the challenges posed by the recent pandemic, nurses continued to provide specialized care grounded in the human act of caring. Nurses remained advocates for patient safety, working in empowered environments that fostered engagement and job satisfaction, thereby enhancing the quality of care and patient outcomes.

Aim

This study aims to assess the work environment of nurses during the ongoing COVID-19 pandemic, with the primary objective of identifying specific areas within the nurses' work environment that require improvement in light of the ongoing impact of the pandemic on healthcare workers.

Materials and Methods

Design

This study employed a quantitative research design to assess the impact of COVID-19 on the nursing work environment. Data were gathered using a validated questionnaire specifically designed for this purpose.

Setting

The current study was carried out at a specialized cancer center and a university hospital in Jordan. The King Hussein Cancer Center is a leading hospital in the Middle East and North Africa region with a 352-bed capacity that provides comprehensive cancer care for approximately 60% of cancer cases in Jordan and patients from various Arab populations. It has been recognized by the American Nurses Credentialing Center as the first Magnet hospital in Jordan [12].

The University Hospital is renowned as one of the distinguished teaching hospitals in Jordan and the region, as its design and healthcare services are dedicated to healthcare education. As a general hospital, it offers a range of clinical and healthcare services and serves as a teaching hospital for university health science students receiving their education and training courses. Nurses from both hospitals were invited to participate in the study and complete the online instrument.

Inclusion and exclusion criteria

Nurses eligible for participation in this study were required to meet the following criteria: They must be employed as registered nurses in the respective hospital for a minimum of one year and dedicate more than 50% of their working hours to providing direct patient care.

Nurses excluded from participation in this study included nurse managers and directors with authority over multiple units who were positioned hierarchically between the nurse manager and the chief nursing officer. Additionally, nurses in roles primarily administrative or supervisory in nature, such as Nurse Educators, Clinical Nurse Coordinators, and Nursing Supervisors, were also excluded from participation

Instrument: AACN Healthy Work Environment (HWE) Assessment Tool

The AACN Healthy Work Environment (HWE) Assessment Tool was employed in this study to evaluate the nurses’ work environment. This assessment tool consists of 18 questions designed to assess the healthcare work environment based on the six HWE standards, each represented by three unique items. These standards serve to identify systemic behaviors that are often overlooked despite compelling evidence indicating their impact on creating safe conditions and facilitating organizational excellence. The AACN has developed a comprehensive framework that underpins the HWE Assessment Tool. This framework is grounded in an evidence-based approach aimed at improving local work environments within healthcare settings. By utilizing this tool, the study sought to gain insights into the nurses’ perceptions of their work environment during the COVID-19 pandemic, focusing on areas that align with the HWE standards [13].

The six standards are (1) Skilled Communication: Nurses must be as proficient in communication skills as they are in clinical skills; (2) True Collaboration: Nurses must be relentless in pursuing and fostering true collaboration; (3) Effective Decision Making: Nurses must be valued and committed partners in making policy, directing and evaluating clinical care and leading organizational operations; (4) Appropriate Staffing: Staffing must ensure the effective match between patient needs and nurse competencies; (5) Meaningful Recognition: Nurses must be recognized and recognize others for the value each brings to the organization’s work; (6) Authentic Leadership: Nurse leaders must fully embrace the imperative of a healthy work environment, authentically live it, and engage others in its achievement. Participants were asked to express their level of agreement or disagreement with each statement using a 5-point Likert scale, where 1 indicated “strongly disagree” and 5 indicated “strongly agree.” Mean scores were calculated for each of the six standards and for the overall questionnaire. The overall score was categorized as follows: 4.00

to 5.00, indicating an “excellent” work environment; 3.00 to 3.99, signifying a “good” work environment; and 1.00 to 2.99, highlighting areas that “need improvement.” Participants were able to complete the 18-question assessment in approximately 10 minutes [13].

According to the AACN, the psychometric features of this tool continue to evolve. The questions and scales underwent a rigorous review for face validity and were administered to a total of 500 participants, divided into two groups of 250 each. Both samples were subjected to reliability testing and exhibited strong internal consistency, with identical factor structures and Cronbach’s alpha scores of 0.80 or higher. Reliability studies were replicated with the previous version of the tool, and additional tests were conducted to establish convergent and discriminant validity using well-known surveys as benchmarks for comparing the subscales [11].

Sampling

The anticipated sample size was calculated using G*POWER, with the following parameters: an alpha level of 0.05, a power level of 0.80, a medium effect size (d = 0.5), and a two-tailed test [14]. This calculation yielded a sample size of 128, with 64 participants from each hospital. An oversampling approach was employed to address incomplete questionnaires, resulting in a final sample size of 144 participants.

Data collection procedure

Participants were selected using a convenience sampling technique. Alongside the primary questionnaire, demographic data were collected. The survey was administered electronically using Google Forms. Ethical approval from the Institutional Review Board (IRB) was obtained from both hospitals prior to commencing the study. Participants were provided with a clear explanation of the study’s purpose and were assured of the voluntary nature of their participation. They were informed of their right to withdraw from the study at any time without penalty and were guaranteed the confidentiality of their responses. Since the questionnaire was distributed electronically, a waiver of documentation for informed consent was applied. Data collected for this study were securely stored on a computer with password protection. Each questionnaire and dataset were assigned a unique identification code number. The researcher’s contact information was made available so that participants could seek additional study information and address any questions they might have.

Data Analysis

The collected data were analyzed using Statistical Package for Social Sciences (SPSS) version 21. Descriptive statistics such as percentages, frequencies, means, and standard deviations were used to summarize and describe the data. T-tests and one-way ANOVA tests were conducted to examine differences between demographic variables and the six HWE standards. The data were validated by a qualified statistician to ensure accuracy and reliability.

Results

Participant Demographics

Table 1 displays the demographic characteristics of the 144 participating nurses. The majority (62%) were female, and 56.9% were married. Among participants, 66% worked in the cancer center, and 63.9% worked in inpatient units. Furthermore, 76.4% of participants had not attended infection control courses.

		Frequency	Percent
Gender	Male	54	37.5
	Female	90	62.5
Marital Status	Single	56	38.9
	Married	82	56.9
	Divorced or Widowed	6	4.2
Education	BSc	107	74.3
	MSc	37	25.7
Hospital	Cancer Center	95	66
	Educational Hospital	49	34
Working Unit	Inpatient	92	63.9
	Outpatient	52	36.1
Infection Control Courses	Yes	34	23.6
	No	110	76.4
Total		144	100

Table 1. Participants' Demographic.

Scores of the HWE Sub-scales

Table 2 displays the mean scores and standard deviations for the HWE items and sub-scales among the participating nurses. Effective decision-making received the highest mean score (mean = 2.48, SD = 0.9), while meaningful recognition received the lowest mean score (mean = 2.3, SD = 0.99) among all sub-scales.

Items	Minimum	Maximum	Mean	Std. Deviation
1. Administrators, nurse managers, physicians, and registered nurses maintain frequent communication to prevent each other from being surprised or caught off guard by decisions.	0	4	2.69	1.034
2. Administrators, and nurse managers, involve registered nurses to an appropriate degree when making important decisions.	0	4	2.46	1.134
3. Administrators and nurse managers work with registered nurses to assureenough staffing, thus maintaining patient safety	0	4	2.42	1.174
4. The formal reward and recognition systems work to make registered nurses feel valued.	0	4	2.24	1.148
5. Most nurses, where I am working have a positive relationship	0	4	2.35	1.067

with their nurse leaders (managers, directors, advanced practice nurses, etc.).				
6. Administrators, nurse managers, and registered nurses make sure their actions match their words; they "walk their talk."	0	4	2.42	1.055
7. Administrators, nurse managers, and registered nurses are consistent in their use of data-driven, logical decision-making processes to make sure their decisions are the highest quality.	0	4	2.48	1.031
8. Administrators and nurse managers make sure there is the right mix ofregistered nurses to ensure optimal outcomes.	0	4	2.4	1.13
9. Administrators, nurse managers, and registered nurses speak up and let people know when they've done a good job.	0	4	2.44	1.056
10. Registered nurses are able to influence the policies, procedures, andbureaucracy around them.	0	4	2.53	1.09
11. The right departments, professions, and groups are involved in important decisions.	0	4	2.67	1.05
12. Support services are provided at a level that allows nurses to spend their time on the priorities and requirements of the patient and family care.	0	4	2.45	1.076
13. Nurse leaders (managers, directors, advanced practice nurses, etc.) demonstrate an understanding of the requirements and dynamics at the point of care, and use this knowledge to work for a healthy work environment.	0	4	2.47	1.077
14. Administrators, nurse managers, and registered nurses have zero-tolerance for disrespect and abuse. If	0	4	2.35	1.106

they see or hear someone being disrespectful, they hold them accountable regardless of the person's role or position.				
15. When administrators and nurse managers speak with nurses, it's not one-way communication or order giving. Instead, they seek input and use it to shape decisions.	0	4	2.28	1.203
16. Administrators, nurse managers, and registered nurses are careful to consider the patient's and family's perspectives whenever they are making important decisions	0	4	2.67	1.01
17. There are motivating opportunities for personal growth, development, and advancement.	0	4	2.22	1.172
18. Nurse leaders (managers, directors) and registered nurses, etc.) are giventhe access and authority required to play a role in making key decisions.	0	4	2.44	1.108
Skilled Communication	0	4	2.48	0.90737
True Collaboration	0	4	2.42	0.97959
Effective decision making	0	4	2.56	0.87723
Appropriate staffing	0	4	2.42	0.97876
Meaningful Recognition	0	4	2.3	0.9993
Authentic Leadership	0	4	2.41	0.91989

Table 2. Scoring of Healthy Work Environment items and Sub-scales.

Comparison of HWE in the Two Hospitals

Table 3 illustrates the comparison of nurses’ perceptions of their work environment between the cancer center and the teaching hospital. Nurses in the cancer center ranked their work environment higher across all HWE sub-scales compared to those in the teaching hospital. Significant differences in group means were observed ($P < .001$), with effective decision-making (mean = 2.93, SD = .76) and skilled communication (mean = 2.71, SD = .82) scoring the highest.

	Hospital	Mean	SD	T	P
Skilled Communication	Cancer Center	2.71	0.82	4.38	< .001
	Educational Hospital	2.05	0.91		

True Collaboration	Cancer Center	2.66	0.93	4.37	< .001
	Educational Hospital	1.95	0.9		
Effective decision making	Cancer Center	2.83	0.76	5.87	< .001
	Educational Hospital	2.02	0.84		
Appropriate staffing	Cancer Center	2.62	0.92	3.45	0.001
	Educational Hospital	2.04	0.98		
Meaningful Recognition	Cancer Center	2.5	0.96	3.49	0.001
	Educational Hospital	1.91	0.96		
Authentic Leadership	Cancer Center	2.66	0.78	4.72	< .001
	Educational Hospital	1.94	0.99		

Table 3. Comparing Healthy Work Environment in the Two Hospitals.

Relationship between HWE Sub-scales and Demographic Variables

The correlation matrix between age, years of experience, and HWE sub-scales is summarized in Table 4 using Pearson product-moment correlations. A strong positive association was observed among all HWE sub-scales (P < 0.001). Additionally, age and years of experience were positively correlated with all sub-scales, particularly with meaningful recognition (r = .313**, .307**; P < 0.001).

		Skilled Comm unication	True Collaboration	Effectivedecisi on making	Appropriatest affing	Meaningful Recognition	Authentic Leadership
Skilled Comm unication	r	1	.840**	.817**	.860**	.825**	.835**
	P	-	< .001	< .001	< .001	< .001	< .001
True Collaboration	r	.840**	1	.877**	.849**	.853**	.815**
	P	< .001	-	< .001	< .001	< .001	< .001
Effective decision Making	r	.817**	.877**	1	.816**	.816**	.825**
	P	< .001	< .001	-	< .001	< .001	< .001
Appropriate staffing	r	.860**	.849**	.816**	1	.850**	.833**
	P	< .001	< .001	< .001	-	< .001	< .001
Meaningful Recognition	r	.825**	.853**	.816**	.850**	1	.825**
	P	< .001	< .001	< .001	< .001	-	< .001
Authentic Leadership	r	.835**	.815**	.825**	.833**	.825**	1
	P	< .001	< .001	< .001	< .001	< .001	-
Age	r	.268**	.254**	.258**	.294**	.313**	.271**
	P	0.001	0.002	0.002	< .001	< .001	0.001
Total years of experience	r	.273**	.270**	.275**	.292**	.307**	.279**
	P	0.001	0.001	0.001	< .001	< .001	0.001

Table 4. Relationship between HWE Subscales.

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Impact of Demographic Factors on the Healthcare Work Environment

Table 5 displays the results of the regression analysis examining the impact of demographic factors on the healthcare work environment.

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.468a	0.219	0.173	14.34496			
a. Predictors: (Constant), Educational course about COVID-19?, Hospital, Working Unit, Education, Gender, MS, Course about infection control?, Working with a COVID-19 Patients							
ANOVAa							
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	7800.926	8	975.116	4.739	.000b	
	Residual	27780.011	135	205.778			
	Total	35580.937	143				
a. Dependent Variable: Total score of healthcare work environment. b. Predictors: (Constant)							
Coefficientsa							
Model	Unstandardized Coefficients		StandardizedCoefficients	t	p	95.0% ConfidenceInterval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	40.249	4.219		9.539	0	31.904	48.594
Gender	0.362	2.615	0.011	0.138	0.89	-4.809	5.534
MS	0.614	2.214	0.023	0.277	0.782	-3.766	4.993
Education	-0.77	2.762	-0.021	-0.279	0.781	-6.233	4.693
Hospital	-11.027	2.74	-0.332	-4.025	0	-16.446	-5.609
Working Unit	1.606	2.586	0.049	0.621	0.536	-3.508	6.721
Working with	-1.583	2.679	-0.05	-0.591	0.555	-6.882	3.715

a COVID-19 Patients							
Attending course about infection control	3.394	3.057	0.092	1.11	0.269	-2.652	9.44
Attending educational course about COVID-19	8.21	2.564	0.258	3.202	0.002	3.139	13.282

Table 5. Regression Analysis of Demographic Factors on Healthcare Work Environment.

The model summary provides information about the goodness of fit of the model. The R-value of 0.468 indicates a moderate positive correlation between the predictors and the dependent variable. The R Square value of 0.219 indicates that 21.9% of the variance in the dependent variable can be explained by the predictors. The Adjusted R Square value of 0.173 indicates that the model is a good fit for the data. The Standard Error of the Estimate value of 14.34496 indicates the average distance that the observed values fall from the regression line. Overall, the model summary suggests that the predictors have a moderately positive relationship with the healthcare work environment.

Discussion

In light of the intricate interplay between nurses’ work environments and the multifaceted challenges posed by the COVID-19 pandemic, our study advances a nuanced understanding of the healthcare landscape during these unprecedented times. The demographic characteristics of our participants, reflecting the gender distribution, marital status, work settings, and educational backgrounds, offer a comprehensive backdrop against which we can dissect the healthcare work environment. The nurses who stood at the frontline of care during this global health crisis navigated not only the clinical intricacies of patient management but also the evolving dynamics of healthcare delivery. Our findings reveal a complex web of relationships, encompassing perceptions of healthcare work environments, the influence of demographic variables, and the distinct characteristics of healthcare institutions. As we embark on this discussion, we aim to explore the implications of these findings, recognizing their importance in fostering resilient and responsive healthcare systems.

Our finding that nurses scored effective decision- making as the highest standard in their work environment takes on a profound significance when viewed through the lens of the COVID-19 pandemic. While this finding is undoubtedly relevant to healthcare workplaces in general, the unprecedented challenges posed by COVID-19 elevated the importance of effective decision-making to an entirely new level. The pandemic brought about a cascade of complex and rapidly evolving situations in healthcare settings, where the ability to make timely and informed decisions became a matter of utmost urgency. Hospitals and healthcare facilities grappled with surges in patient numbers, critical shortages of essential supplies, ever-shifting clinical guidelines, and the need to adapt swiftly to novel treatment protocols [15-17]. In this crucible, nurses found themselves at the forefront, where their capacity to make effective decisions influenced patient outcomes and played a pivotal role in maintaining the integrity of healthcare systems.

Furthermore, the emotional burden and exhaustion experienced by nurses during the pandemic intensified the importance of sound decision-making [9]. Nurses were not only dealing with clinical complexities but also navigating ethically fraught decisions and resource allocation dilemmas. These challenges, underscored by the global impact of the COVID-19 pandemic, highlight nurses’ remarkable resilience and proficiency in their decision-making abilities. This trait resonates far beyond the confines of the pandemic and holds valuable lessons for the future of healthcare delivery [18].

Our study has illuminated an intriguing aspect of healthcare communication, with skilled communication emerging as the highest-scoring standard among nurses in the cancer center. This finding takes on particular significance in the backdrop of the COVID-19 pandemic, which reshaped the dynamics of patient-nurse interaction.

While our result aligns with a study conducted by (Newell & Jordan, 2015) [19], which underscores the importance of effective communication, it also prompts a nuanced exploration of how healthcare communication has evolved in the face of unprecedented challenges. Qualitative studies have historically shown that nurse-patient communication is often centered around operational or administrative practices, with nursing procedures primarily task-oriented [20, 21]. However, in the context of COVID-19, the nature of nurse-patient communication has transformed. Nurses found themselves not only addressing clinical needs but also serving as a vital link between patients and their families, who were often unable to be physically present due to safety restrictions. This shift underscores the critical role of skilled communication in facilitating patient understanding, emotional support, and family engagement during heightened anxiety and uncertainty. While healthcare systems have traditionally been oriented toward healthcare professionals' views, the pandemic necessitated a more patient-centered approach. As such, our findings not only affirm the enduring importance of skilled communication but also highlight how it evolved in response to the unique challenges posed by the COVID-19 pandemic.

In our study, it is noteworthy that the sub-scale of meaningful recognition received the lowest score among nurses in the educational hospital, shedding light on an aspect of the healthcare work environment that warrants careful consideration, especially within the context of the COVID-19 pandemic. This finding underscores the complex nature of meaningful recognition, which can vary significantly from one nurse to another. Personal attributes and preferences may indeed play a pivotal role in how nurses perceive and value recognition. What sets this discovery against the backdrop of COVID-19 is the unique set of challenges and stresses that healthcare professionals, including nurses, encountered during the pandemic. The pandemic emphasized the importance of meaningful recognition as a driver of lower burnout rates and enhanced workplace satisfaction. The emotional toll of caring for patients in isolation, managing limited resources, and facing unprecedented clinical challenges made recognition desirable and essential for bolstering nurses' dedication to their roles. The pandemic's demands placed healthcare teams under immense pressure, and meaningful recognition emerged as a beacon of positivity and team building in the healthcare environment. In essence, the challenges brought by COVID-19 have heightened the significance of meaningful recognition as a means of revitalizing nurses' commitment to their profession, fostering job satisfaction, and fortifying teamwork a lesson that holds enduring relevance for the future of healthcare work environments [22].

The COVID-19 pandemic has further emphasized the imperative of collaboration and teamwork in healthcare settings. Offering nurses, leaders, and managers credentials to sustain education agendas that expand collaboration skills has taken on added significance as healthcare systems grapple with unprecedented challenges. The pandemic has necessitated rapid, efficient, and seamless collaboration across diverse healthcare teams to manage patient surges, allocate resources judiciously, and adapt to evolving clinical guidelines. As per the terms of the AACN, healthcare settings should not only prioritize educational programs but also assess the strategies that determine the accountability of team members when it comes to collaboration. The pandemic has highlighted the vital role of collaboration in ensuring patient safety and optimal outcomes. Furthermore, healthcare settings should assure unlimited and unrestricted permits to different shared forums within the hospital and nursing work environment, such as shared governance councils and ethics committees. These forums have proven to be invaluable during the pandemic, serving as platforms for timely decision-making, ethical guidance, and collaborative problem-solving in the face of COVID-19- related challenges.

The COVID-19 pandemic has highlighted the significance of appropriate staffing and authentic leadership in healthcare settings. Substantial evidence, reinforced by the pandemic's challenges,

unequivocally demonstrates that improper staffing can have profound implications for patient safety. Nurses, who have been at the forefront of the pandemic response, keenly recognize the detrimental effects of improper staffing, which not only hinder their ability to provide quality nursing care but also contribute to burnout and job dissatisfaction. The pandemic, marked by surges in patient numbers and the need for rapid response, has magnified the complexities of achieving appropriate staffing. The evolving needs of patients with COVID-19 demanded nurses with specific knowledge, skillfulness, and competencies, further underscoring the critical nature of this standard in ensuring patient safety. Authentic leadership, especially in times of crisis like the COVID-19 pandemic, becomes paramount. Nurse leaders, serving as beacons of guidance and support, are instrumental in enhancing nurses' skills and competencies. They play an indispensable role in facilitating professional development, which in turn bolsters nurses' ability to deliver optimal care. In the absence of authentic leadership, nurses may face increased challenges in providing the best care to patients and their families, particularly during times of heightened stress and uncertainty caused by a global health crisis.

Limitation

While our study offers valuable insights into nurses' perceptions of their work environment during the COVID-19 pandemic, it is essential to acknowledge certain limitations that may have been magnified by the unique circumstances of the pandemic. Firstly, our study used a convenience sample of nurses working in a cancer center and an educational hospital. While this approach allowed us to gather crucial data during a challenging time, it may limit the generalizability of our findings to a broader nursing population. The pandemic brought forth extraordinary conditions that may have influenced the perspectives and experiences of nurses across various healthcare settings. Secondly, our use of a descriptive design, while appropriate for our research aims, inherently constrains the ability to draw causal inferences. The dynamic and evolving nature of the pandemic posed inherent difficulties in establishing causal relationships between particular variables and nurses' work environment perceptions. Despite these limitations, our study provides a valuable snapshot of the challenges and strengths within nurses' work environments during a global health crisis, offering a foundation for further research and evidence-based interventions in nursing practice.

Recommendations

Nurse managers and leaders must proactively address the challenges associated with appropriate staffing to ensure the team's effectiveness in the face of ongoing healthcare crises, such as the persistent threat of COVID-19. Developing comprehensive strategies to address staffing challenges is paramount for achieving successful patient satisfaction and safety, enhancing overall healthcare strategy programs, and meeting staff retention goals. The COVID-19 pandemic has underscored the critical role of nurse leaders in crisis management and response, making it imperative for them to prioritize staffing adequacy as a fundamental component of a healthy work environment. Furthermore, nurturing authentic leadership skills among nurse leaders is of utmost importance, particularly considering the enduring effects of the COVID-19 pandemic on nurses and the healthcare sector. Authentic leaders must envision a future healthcare work environment that is resilient and responsive to the unique demands posed by global health crises. In these trying times, nurse leaders serve as role models and should exemplify professionalism, effective communication, collaborative prowess, and the ability to build cohesive and resilient teams. They must act as influencers for positive transformation and be dedicated to supporting and guiding their nursing staff. By understanding the evolving needs at the point of care and considering the potential long-term repercussions of the pandemic on nurses and the healthcare sector, nurse leaders can proactively shape a sustainable and thriving healthcare work environment that is well-equipped to weather future challenges.

In conclusion, a healthy work environment in nursing is not just a matter of safety and satisfaction

but a fundamental pillar of empowerment and resilience, particularly in the face of unprecedented challenges like the COVID-19 pandemic. The findings of this study provide valuable insights for nursing decision-makers and clinical practitioners, shedding light on the state of the nursing work environment during the pandemic. Beyond the immediate crisis, this study underscores the urgent need to prioritize nurses’ mental health, given the escalating workloads and the demands of treating an unfamiliar and rapidly evolving illness. The COVID-19 pandemic has magnified the significance of mental health support in healthcare settings. Still, it also serves as a poignant reminder that the nursing work environment, even under normal circumstances, can be emotionally taxing. As healthcare professionals continue to navigate these demanding terrains, addressing the mental health needs of nurses becomes paramount for fostering a resilient and sustainable nursing workforce.

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