

Relationship Between Nursing Work Environment and Patients Safety Culture at Al-Dawadmi General Hospital in Saudi Arabia



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1-ABSTRACT

Background: Nurses' work environments have a significant influence on the quality and quantity of care they can deliver, as well as workforce retention. Understanding work environmental variables that need to be improved, such as safety, climate, and teamwork could aid in the maintenance of a satisfying hospital environment, perhaps retaining talented nurses and increasing their desire to stay. The goal is to establish the association between the nurses' work environment and patient safety culture at Al Dawadmi General Hospital in Saudi Arabia. **Method:** The descriptive correlational design was utilized in this investigation at Dawadmi General Hospital in Dawadmi, Saudi Arabia. A convenience sample of 281 available staff nurses will be included using two tools: Nursing Work Environment Scale, and Patient Safety Culture Scale. **Results:** Half of the study's staff nurses (47.7%) have average level of nursing work environment, 72.6% have average level of patient safety culture, and there is a highly statistically significant relationship between nurses' perception of staff nurses' work environment and patient safety culture ($r= 0.74 / p=0.000$). **Conclusion:** It was determined that the nurse practice environment has a substantial impact on preserving patient safety culture. So, the current study confirmed that optimizing nursing practice environments could improve the patient safety culture by making care safer and reducing adverse events by providing as many resources and staffing as possible, encouraging participation in decision-making and teamwork, and offering appropriate incentives. **Recommendation:** An interventional effective patient safety program that incorporates it into health professional education should be continuously supported and maintained by health care providers across the company.

Keywords: Al Dawadmi General Hospital, Nursing Work Environment, Patients Safety Culture, Saudi Arabia

2- Introduction:

Technological improvements, older people, changing sickness patterns, which is novel therapy discoveries, reforms in politics, and legislation all lead to the ongoing evolution of medical facilities. Changes may be difficult to accomplish because they contradict people's innate need for a stable environment. Employees frequently encounter psychological ambiguity regarding the impact of organizational changes on their function, place of employment, and individual life (Baghshykhi, Rahimi, Azizi-Fini, Haji Jafari, & Izadi-Dastgerdi, 2020).

Nursing is the most common healthcare occupation in the nation. Nurses play a critical role in healthcare systems. Nurses account for over half of the global health workforce, with an estimated 27 million men and women employed (Smiley et al., 2021). Global nurse administrators have faced issues as a result of the nursing shortage and the subsequent harm to healthcare. Access to high-quality healthcare is critical for ensuring population health; by 2030, a 7.6 million nurse shortage is predicted. Healthcare firms are now primarily concerned with this problem, which is causing

employee dissatisfaction at work (Rodríguez-García et al., 2023).

The term work environment implies organizational elements of the workplace that support or hinder professional activities. The workplace elements have an effect on the job happiness and retention of health professionals. The elements of a practice setting known as the nurses' work environment may assist or hinder professional nursing practice, and they have been connected to improved patient outcomes (Mohammad et al., 2020). Nurses' work environments have a significant impact on the quantity and care quality they can provide, as well as workforce retention. A pleasant hospital culture may increase the likelihood that trained nurses will remain and aid in their retention if areas such as the safety environment and teamwork that need to be addressed (Shosha, Oweidat, Dmaid, & Nashwan, 2023).

Finding characteristics that contribute to a positive work environment may reduce nurses' intention to leave their positions while increasing their level of commitment. These components

include organizational support, doctor-nurse relationships, autonomy, and environmental control. Nursing administrators realize that the safety environment, teamwork, and intent to remain are critical ideas because they influence patient and nurse outcomes. Understanding these issues can help to build financial interventions aimed at keeping more professional and skilled nurses on staff while avoiding the need to spend more money on hiring and onboarding new employees (Al Yahyaei, Hewison, Efsthathiou & Carrick-Sen, 2022).

Healthy nurse working conditions are strongly linked to increased hospital security and patient care. Patient safety is Among the most significant obstacles outside the healthcare business today. Almost every newspaper item, radio and television program, and medical journal publication addresses patient safety hazards. Hospital patient safety is one of the most important aspects of healthcare systems since it has a direct impact on patient health and safety. The working crew incorporates safety into their duties as supervisors, administrators, and caregivers. The goals of safety include the regular decrease of medical errors and the improvement of care delivery (Fronza & Labrague, 2022).

According to one study, 10% of hospitalized patients in Europe have preventable adverse events, which cause pain and losses for patients, their families, and healthcare providers. Patient safety refers to the prevention of mistakes and bad consequences for people receiving medical care. Clinical safety, on the other hand, is described as "Keeping the risk of damage connected with healthcare to a tolerable minimum". clinical safety culture refers to the extent to which an organization follows, encourages, and supports safe processes (Malinowska-Lipień et al., 2021).

It is widely acknowledged that the work environment can influence midwives' intentions to leave as well as the safety culture. A favourable work environment is associated with a lower incidence of morbidity and mortality, as well as a lower risk of occupational injuries. The patient safety culture refers to the shared values, beliefs, and standards held by medical personnel and others within an organization that influence their actions and behaviour when giving care. A work environment that prioritizes patient safety motivates staff nurses to address reoccurring instances of patient neglect. Staff nurses are encouraged to report and discuss such situations as soon as possible in order to address problems that, if left unchecked, could evolve into catastrophic

incidents. According to recent research, a detrimental correlation relating nurses' work environments and safety cultures, as well as the nursing care they give. Furthermore, it has a substantial impact on healthcare providers' intentions to stay in the field, as well as their recruitment and retention, which takes an indirect effect on the nursing care quality (Ibrahim & Abohabieb, 2020).

2.1. Significance of the study

Creating a safer healthcare system and developing a healthy work environment have emerged as national priority in today's complicated and fast-paced healthcare environment. According to WHO estimations for 2021, unprotected medical services and activities cause injuries and fatalities to tens of millions of people over the world. Verifying the safety culture, which is linked to the healthcare setting, is the first step towards assuring healthcare quality. The notion of the nurse's workplace and its impact on safety is important to healthcare firms because it helps them retain nurses while also providing safe treatment. High-quality healthcare must prioritize patient safety, which is why it is a major priority in today's developed nations. To create a successful safety culture and ascertain how the work environment of nurses affects patient safety culture, it is imperative to analyze the safety culture that currently exists inside a healthcare facility (Kilcullen, et al., 2022). So, the current study aimed to assess the association of nurses work environment to patients' safety culture at Al Dawadmi General Hospital in Saudi Arabia.

2.2. Aim of the Study

This analysis attempted to determine the relationship between nursing work environment and patients' safety culture at Al Dawadmi General Hospital in Saudi Arabia

2.3. Research Questions:

The specific research questions were:

Q1. What is work environment as perceived by nurses at Al Dawadmi General Hospital in Saudi Arabia?

Q2. What is patient safety culture as perceived by nurses at Al Dawadmi General Hospital in Saudi Arabia?

Q3. Is there an association between the nursing work environment and patients' safety culture at Al Dawadmi General Hospital in Saudi Arabia?

3. Method

3.1. Design

A descriptive correlational study employed a design. This design was used to determine if, and to what extent, a relationship exists between variables (**Lai, 2018**).

3.2. Setting

This study was behaved at Dawadmi Hospital in Dawadmi, Saudi Arabia. The hospital contains 2 floors; the first floor contains the emergency department, outpatient clinics, blood bank unit, laboratory department, and dialysis unit. The medical, obstetrics/gynecology, surgical, intensive care, operating, and pediatric departments are all located on the second floor. The hospital can accommodate 200 beds in total. There are 300 staff nurses that hold a diploma and a bachelor's degree. The current study includes every unit from the past.

3.3. Participants

A convenience sample of all available nurses (n= 281) who were accountable for providing patient care in the previously mentioned units, and who fulfilled the criteria of having at least one year of experience to express their opinion about study variables included in the study.

3.4. Tools of Data Collection

Tool I: Nursing Work Environment Scale. This scale was divided into two parts:

The first part was used to identify the personal characteristics of the study nurses such as age, gender, educational qualification, unit, years of experience, and marital status.

The second part was developed by **Lake (2002)** to assess nurses' perceptions of their work environment. It included 31 items classified into 5 dimensions as follows; "Nurses' participation in hospital affairs" (9 items); "Nursing foundations for quality of care" (10 items); "Nurse manager leadership and support of nurses" (5 items); "Staffing and resource adequacy" (4 items); and "Collegial nurse and physician relations" (3 items). Respondents rated the items on a 5-point scale ranging from (1) "Strongly disagree" to (5) "strongly agree". The scoring system of perceived work resilience dimensions ranged from 0-100. It was categorized into three levels according to **Aiken, Clarke, Sloane, Lake and Cheney (2008)** as follows.

- Low level work environment <50%,
- Average level work environment 50-75%,
- Good level work environment >75%
-

Tool II: Patient Safety Culture Scale.

It was developed by The Agency for Healthcare Research and Quality (AHRQ), (2019) to assess the culture of patient safety among nurses. It includes 30 items categorized into nine domains as follows; Teamwork (4 items), staffing and work pace (4 items), organizational learning (3 items), response to error (3 items), clinical managers support for patient safety (3 items), communication and feedback about error (3 items), communication openness (3 items), hospital management support for patient safety (3 items); and handoffs and Information exchange (4 items). Respondents rated the items on a 5-point scale ranging from (1) "Strongly disagree" to (5) "strongly agree" for all items, except items of two domains (communication and feedback about error and communication openness) ranging from 1 for never to 5 for always. The higher scores indicate more positive perception of patient safety culture. Prior to computing total scores, items with negative direction were reversed coded. The total score was computed and classified into four levels according to (AHRQ, 2019) as follows.

- Poor 60 %,
- Good 60->75%,
- Very good (75- > 85%),
- Excellent ≥85%

3.5. Validity and Reliability

Five highly qualified academic staff members from Mansoura University's Faculty of Nursing evaluated the study tools' content validity and made revisions based on their feedback. The tools were rewritten to improve their readability, comprehensiveness, ease of use, and clarity. A Cronbach alpha testing was utilized to test the study tools' reliability. Researcher changed three tools and translated them into Arabic. The scales measuring intent to stay, patient safety culture, and nursing work environment reliability were, respectively, (0.81, 0.80 & 0.77).

3.6. Pilot Study

Thirty staff nurses (10%) of the overall study population participated in a pilot study to examine the practicality, clarity, and amount of time needed to complete the questionnaires. The entire study sample did not include those staff nurses. The appropriate adjustments made in light of pilot study's findings.

3.7. Fieldwork

Data was collected at Al Dawadmi General Hospital. The actual field work was started from July 2023 to September 2023. The researcher meets staff nurses in different three shifts morning, afternoon and night every day. Staff nurses filled in the tools individually at once and they read the questionnaires and filling Give 20 minutes to fill the questionnaire sheet.

3.8. Ethical Considerations

The Mansoura University Faculty of Nursing's Research Ethical Commission provided ethical approval. The researcher discussed the nature and purpose of the study to nurses. All participants advised that their participation in the study was optional, and each person provided written consent. The confidentiality of the gathered data was secured by assigning a code number to the questionnaire sheets. Participants were informed that the tools' content would only be utilized for research purposes. The participants' right to withdraw from the study at any time was verified.

3.9. Statistical Analysis

Data was organized, tabulated, and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 22, SPSS Inc. Chicago, IL, USA). Quantitative data were analyzed using the mean, range, and standard deviation. For qualitative data, the Chi-square test (2) was used to classify a categorical set of data based on frequency, percentage, or proportion of each category, comparison of two groups, and other factors. To interpret test results, significance was considered as $p < 0.05$.

4. Results

The personal traits of the nurses under investigation are displayed in Table 1. The majority of the investigated nurses (52.0%), as shown in the table, were in the 30- to 40-year-old age range. A third or more of the nurses in the study had six to ten years of experience, whereas only a small portion (28.1%) have more than ten years of experience. The majority of the nurses (60.5%) are female, 86.5 percent have bachelor's degrees, are married, and work in inpatient units.

Table (2) mean and standard deviation of all nursing work environment dimensions as perceived by the studied staff nurses. This table revealed that the highest mean score was 37.50 ± 7.08 found for Nursing Principles for Quality of Care. While the lowest was 11.34 ± 2.17 for collegial nurse-physician relations. Overall dimensions of nursing

work environment represent 110.21 ± 20.97 mean scores.

Figure (1) shows mean percentages of nursing work environment dimensions as perceived by the staff nurses. The mean percentages of the nursing work environment parameters as reported by staff nurses are displayed in Figure (1). According to this figure, the collegial nurse-physician relations have the highest mean percentage (75.6%), followed by the nursing foundation for quality of care (75.0%). While the personnel and resource adequacy factor had the lowest

Figure (2) shows levels of nursing work environment as perceived by the studied staff nurses. This figure revealed that about half of the studied staff nurses (47.7%) have an average level of nursing work environment, whereas only (7.8%) have poor level of nurses' perception of nursing work environment. And about (44.5%) have a good level of the studied nurse's perception of work environment.

Table (3) shows descriptive statistics of patient safety culture as perceived by studied staff nurses. This table revealed that the highest mean was (16.13 ± 2.68) for teamwork within units. While the lowest mean was (7.52 ± 2.60) reported for non-punitive response to error. And the overall perception of patient safety culture represents 105.00 ± 11.83 mean scores.

In Figure (3) the study's staff nurses' perceptions of the patient safety culture. According to the data, the majority of the staff nurses under study (72.6%) had an average patient safety culture, while 24.6% had a strong patient safety culture. And only 2.8% have a patient safety culture that is not up to par.

Table (4) shows mean scores differences of work environment, patient safety culture, and intention to stay in relation to personal characteristics of the studied staff nurses. According to this table, the work environment and patient safety culture have no statistically meaningful relationship with each other's personal qualities. However, a statistically significant relationship has been found between the staff nurses' marital status and patient safety.

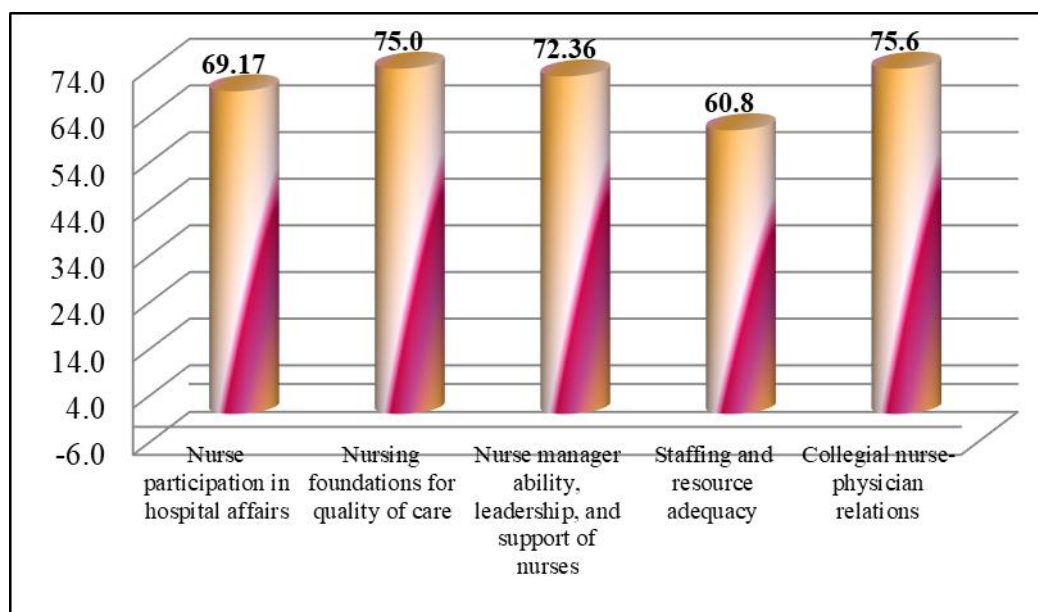
Figure (4) depicts the link between staff nurses' work environments and patient safety cultures. This figure displays that there is a very statistical association between nurses' perceptions of staff nurses' work environments and patient safety culture ($r = 0.74/p = 0.000^{**}$).

Table (1). Personal Characteristics of the Studied Nurses (n=281)

Characteristics	n	%
Age years		
▪ 20-30	106	37.7
▪ 30-40	146	52.0
▪ >40	29	10.3
<i>Mean ± SD</i>	<i>33.34 ± 5.93</i>	
Gender		
▪ Male	111	39.5
▪ Female	170	60.5
Marital status		
▪ Single	88	31.3
▪ Married	198	67.3
▪ Divorced	4	1.4
Level of education		
▪ Diploma degree	14	5.0
▪ Technical degree	3	1.1
▪ Bachelor's degree	243	86.5
▪ Master's degree	21	7.5
Experience years		
▪ 1-5	90	32.0
▪ 6-10	112	39.9
▪ >10	79	28.1
<i>Mean ± SD</i>	<i>8.76 ± 5.54</i>	
Unit		
▪ Inpatient units	214	76.2
▪ Intensive care units	67	23.8

Table (2). Mean and Standard Deviation of all Nursing Work Environment Dimensions as Perceived by the Studied Staff Nurses (n=281)

Nursing work environment subscale	No of items	Min - Max	Mean±SD
• Nurse participation in hospital affairs	9	10.0-45.0	31.13±6.76
• Nursing foundations for quality of care	10	11.0-50.0	37.50±7.08
• Nurse manager ability, leadership, and support of nurses	5	5.0-25.0	18.09±4.30
• Staffing and resource adequacy	4	4.0-20.0	12.16±4.02
• Collegial nurse-physician relations	3	3.0-15.0	11.34±2.17
Overall dimensions of nursing work environment.	31	35.0-155.0	110.21±20.97



*Proportions are calculated relative to extreme score.

Figure (1). Mean Percentages of Nursing Work Environment Dimensions as Perceived by the Staff Nurses (n=281)

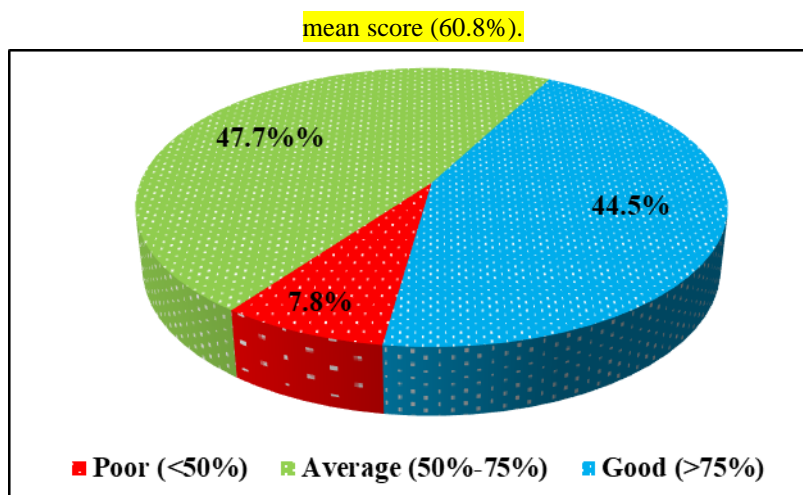


Figure (2). Levels of Nursing Work Environment as Perceived by the Studied Staff Nurses (n=281)

Table (3). Descriptive Statistics of Patient Safety Culture as Perceived by Studied Staff Nurses (n=281)

Patient safety culture domains	No of items	Min - Max	Mean \pm SD
▪ Teamwork within units	4	4.0-20.0	16.13 \pm 2.68
▪ Staffing	4	7.0-19.0	13.49 \pm 1.67
▪ Organizational learning	3	3.0-15.0	11.75 \pm 1.97
▪ Non-punitive reaction to error	3	3.0-15.0	7.52 \pm 2.60
▪ Clinical managers support for patient safety	3	3.0-15.0	11.12 \pm 2.27
▪ Communication and feedback about error	3	3.0-15.0	11.54 \pm 1.95
▪ Communication openness	3	3.0-15.0	9.96 \pm 2.06
▪ Hospital management support for patient safety	3	3.0-15.0	10.47 \pm 1.98
▪ Handoffs and Information exchange	4	4.0-20.0	13.02 \pm 3.99
Overall patient safety culture dimensions	30	57.0-140.0	105.00\pm11.83

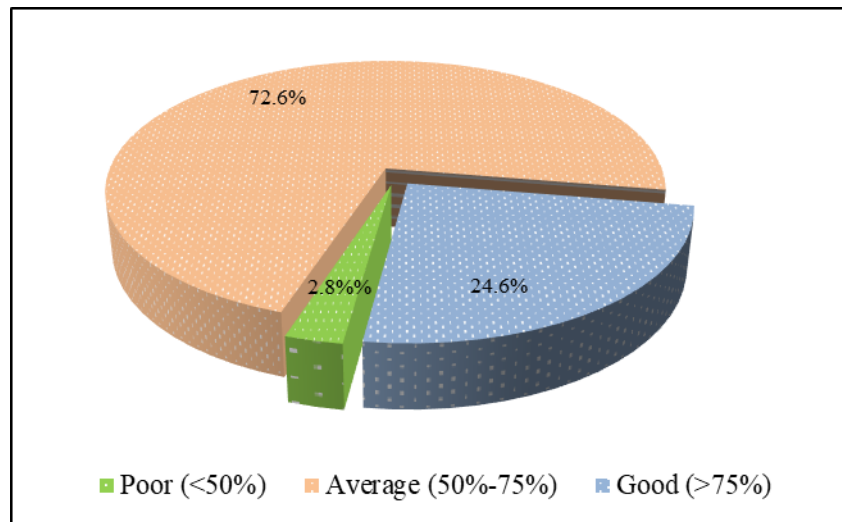


Figure (3). Levels of Patient Safety Culture as Perceived by Studied Staff Nurses (n=281)

Table (4). Mean Scores Differences of Work Environment, and Patient Safety Culture, in Relation to Personal Characteristics of the Studied Staff Nurses (n=281)

Characteristics	Nursing Work Environment	Patient Safety Culture
	Mean \pm SD	Mean \pm SD
Age years		
▪ 20-30	109.96 \pm 23.61	105.46 \pm 13.52
▪ 30-40	109.77 \pm 19.48	104.21 \pm 11.01
▪ >40	113.34 \pm 18.17	107.31 \pm 8.71
<i>F value/p-value</i>	<i>0.36/0.69</i>	<i>0.96/0.39</i>
Gender		
▪ Male	106.07 \pm 23.84	103.36 \pm 13.74
▪ Female	112.91 \pm 18.44	106.08 \pm 10.29
<i>t value/p-value</i>	<i>1.74/0.08</i>	<i>1.89/0.06</i>
Marital status		
▪ Single	111.53 \pm 23.20	106.28 \pm 14.30
▪ Married	109.42 \pm 19.90	104.30 \pm 10.09

▪ Divorced	127.00±14.14	110.00±24.85
<i>F value / p-value</i>	<i>0.95/0.39</i>	<i>1.21/0.30*</i>
Level of education		
▪ Diploma degree	100.07±18.06	102.21±7.09
▪ Technical degree	111.67±14.98	98.00±6.08
▪ Bachelor degree	111.24±20.78	105.60±11.90
▪ Master degree	104.86±24.15	100.95±13.16
<i>F value/p-value</i>	<i>1.76/0.16</i>	<i>1.65/0.17</i>
Experience years		
▪ 1-5	111.99±23.78	104.96±13.96
▪ 6-10	109.63±20.61	105.44±11.66
▪ >10	109.01±17.96	104.44±9.26
<i>F value/p-value</i>	<i>0.49/0.61</i>	<i>0.16/0.85</i>
Unit		
▪ Inpatient units	108.98±21.37	104.66±12.15
▪ Intensive care units	114.15±19.24	106.10±10.75
<i>t value/p-value</i>	<i>1.76/0.07</i>	<i>0.56/0.38</i>

* Statistically significant ($p \leq 0.05$)

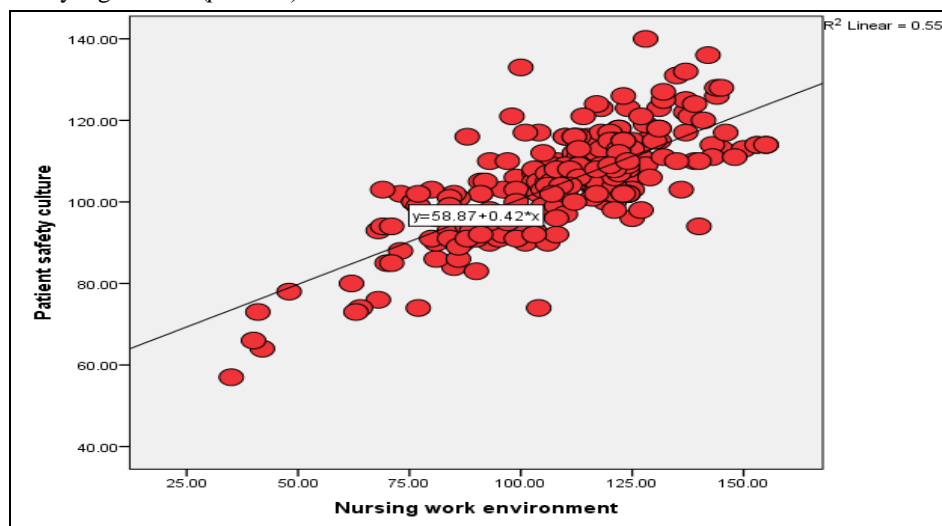


Figure (4). Relationship Between Staff Nurses' Work Environment and Patient Safety Culture (n=281)

5. Discussion

In order to provide comprehensive care to patients of all ages, nurses are essential. There may be differences amongst nurses employed in various care delivery contexts in the elements or domains that make up their job satisfaction. According to **Chaladthanyagid et al. (2024)**, these domains can include the work environment, culture and autonomy, accessibility to healthcare resources, commuter transportation, and the capacity to move between an outreach healthcare unit and a hospital. The health and safety of patients are correlated with the work attitude of staff nurses, who are essential individuals in the medical team. environments that are suitable for staff nurses' work, since certain

hospitals have been found to have an easier time luring and keeping professionals, which increases the duty of nurses to deliver high-quality healthcare (**Tan, 2021**).

Organizational characteristics make up the nursing work environment that either support or impede the professional practice of nursing. Appropriate assistance is required to draw and keep nurses in order to establish a positive practice environment that will benefit patients and increase a nurse's sense of fulfillment (**Maassen, Svan Oostveen, Vermeulen, & Weggelaar, 2021**). The nursing work environment includes nurses' engagement in hospital affairs, nursing foundations for excellent care, nursing management skills, support and leadership, and enough staffing, and

cooperative nurse-physician interactions (**Tan, 2021**).

Healthcare organizations are essential to providing patients with safer and more pleasant conditions in which to perform nursing. In order to improve teamwork, patient care, staff retention, and absences due to sickness, organizations should take the initiative to support the health and well-being of health professionals. It will also improve outcomes, build staff loyalty to the organization, and promote a patient safety culture. (**Pereira, Ribeiro, Fassarella, & Santos, 2023**).

The study's conclusions indicate that most staff nurses who responded to the survey reported having an ordinary work environment. A conclusion may be explained by the fact that nurses apply the standard of care to improve patient outcomes by implementing continuous improvement and offering opportunities for continuing education, have more control over their practice and surroundings, and work well as a team to care for patients.

This is corroborated by **El-Deeb, Fakhry, and Abed-Aleem's (2021)** study on the relationship between the workplace environment of staff nurses and horizontal violence. They discovered that most of the nurses in their research had a mediocre perception of the setting in which they practiced nursing. This result is consistent with research by **Al Moosa et al. (2020)**, evaluated nurses' perceptions of their work settings at Saudi Arabia's Tertiary Care Hospital and discovered that the nurses in question had moderate levels of perception. Furthermore, **AL-Dossary** did a study in 2022 to examine the effect of the work environment of nurse on patient safety in Saudi hospitals. According to the study's findings, generally participants felt better about their working conditions at Saudi Arabian hospitals.

However, when evaluating the psychological capital and work environment of nurses, **Ibrahim, Elwekel, Osman, and El-Gilany (2020)** found the opposite, with half of the nurses in their study perceiving a mixed work environment that was occasionally good and occasionally poor. It also contradicted the findings of **Aboshaiqah's (2015)** study, which examined the working conditions for nurses in Saudi Arabia and found that, according to the participating nurses, all service units of a hospital run by the government had a favorable work environment. Further research by **Gurková et al. (2021)** revealed that those who employed in university teaching hospitals were rated differently than nurses from regional non-teaching hospitals based on two

organizational structural variables: the category of hospitals (hospital and unit variables) and the teaching status of hospitals.

About half of the nurses in the survey participated in hospital affairs, according to the study's findings. This might be as a result of the encouragement to participate in internal governance, hospital and nursing committees, and decision-making processes. Also, it may be due to adequate opportunities for advancement for staff nurses, and satisfaction regarding management's responsiveness to nurse concerns. This is agreed with **Ibrahim (2024)** who mentioned that nurses are able to effectively execute decisions in order to establish and maintain patient safety, enhance the overall quality of care, promote nurse retention within the profession, and ensure job satisfaction. In addition to, this finding was similar to **Almuhsen et al. (2017)** who conducted a study at King Fahd Medical City in Saudi Arabia among nursing staff and indicated that the nurse participation in hospital affairs dimension was at moderate level.

This result was parallel to a study conducted by **Cengiz, Yoder and Danesh (2021)** to study perioperative nurses' perceptions of their nursing practice environments and found nursing participation in hospital affairs was the least perceived domain by the studied nurses between NPE domains. Furthermore, result of current study disagreed with a study performed by **Gasparino et al. (2019)** who tested the Assessment of the professional work environment of nurses in health facilities and revealed that the participation of nurses in hospital affairs obtained the most unfavorable evaluation in the perception of the participants.

As the frontline healthcare providers who are often found at the bedside patients, nurse is crucial toward functioning of the healthcare system (**Boamah et al., 2018**). An organization's well-being may be negatively impacted by the negative effects of the nursing shortage, which include burnout among nurses and increased rates of patient morbidity and death (**UDOFIA, 2022; Jones et al., 2019**).

Result of the current study is agreed with **Olds et al (2019)** who observed work environment of nurse, safety climate and patient outcomes in four large states of California, Florida, Pennsylvania and New Jersey and found the foundation for quality had the highest mean score of environment for the conduct of professional nursing domains. And another study conducted by **Ibrahim, Elsayed, and Metwally (2019)** who

examined the impact of psychological empowerment and the professional nursing practice environment on nurses' adaptability to change and found that the nurse foundation for quality-of-care domain was the second most perceived one amongst all NPE domains.

This finding of the study was similar to a study conducted by **Almuhsen et al. (2017)** who examined work environment characteristics as perceived by nurses in Saudi Arabia at King Fahd Medical City in Saudi Arabia and indicated that the perception of the studied nursing staff towards work environment was at high level related to nursing foundation for quality of care.

Moreover, **Ahn et al. (2018)** discovered that the nursing foundation for quality of care was a highly significant indication of caring behavior among Korean clinical nurses. Furthermore, it has been noted by **Cho et al. (2019)** and **Pahlevan Sharif et al. (2018)** that nurses feel obligated and strongly motivated to repay the organization for the favors they have received by providing patients with high-quality care services when they believe the working atmosphere as positive and supportive, which includes having enough staff, enabling nurses to get involved with hospital affairs, nurse manager support, encouraging excellent nursing service, and forming good nurse-physician relationships.

However, study conducted in Sabah, Malaysia by **Arsat et al. (2022)** examined correlation between the working environment and nurses' caring behavior in public hospitals and public health services. The study concluded the gap by looking at how the working environment affected nurses' participation in hospital affairs, the foundations for quality of care, the ability, leadership, and support of managers, the adequacy of staffing and resources, and the relationships between nurses and physicians. This is the same view of **Ibrahim and Fadlalmola (2020)** who emphasized that nurses comprise the largest group of professionals within the healthcare workforce and improvement in nurses' practice environment has the emphasis, encounter, and as recommended by several studies, commissions, and committees; low productivity, job discontent, poor work-life quality, and dangerous and subpar patient care have all been linked to the absence of nurses and a productive, healthy work environment.

Supervisor supports are an important part of the work environment since nurse who believe supported by their supervisor are more likely to be satisfied, perform well, and leave the workplace less frequently (**Basahal, Alshehri, & Bajaba,**

2022). In contrast, when nurses lack support from their supervisor, they are less motivated and engaged, which has a detrimental impact on retention rates (**Ibrahim, Suan, & Karatepe, 2019**).

Current study results demonstrated that the majority of the nurses evaluated possessed manager skills, leadership, and support. This might be attributed to support from the organization, supervisor, and coworkers, such as taking into account nurses' aims and values, caring about their well-being and opinions, listening to their grievances, and not ignoring them. The supervisor not only controls human resources, but also leads, guides, and supports all employees in order to maintain a positive working environment and provide higher-quality care. **Ibrahim (2024)** supports this. He used the job demand, control, and support model to explore the relationship between nurses' workplace stress and their quality of life at the Magdy Yacoub Heart Foundation.

Contrary to **Jalilian et al. (2019)** findings, which examined the association among job stress and fatigue among hospital nurses working in educational facilities connected to Iran's Shiraz University of Medical Science, the nurses in this study reported a moderate degree of supervisor support at work. Furthermore, while examining the connection between organizational support and burnout among nursing staff in critical care units at El-Kasr Al Ainiy University Hospital, **Abdel Azize et al. (2023)** found a moderate level of supervisor support among the nurses. This is also the opinion expressed by Rattrie, Kittler, and Paul (2020), who stressed the significance of encouraging nurses' motivation and work engagement in order to help them reach their objectives, satiate their need for autonomy, and boost their willingness to put effort into their work.

They also suggest that access to opportunities and resources, along with managerial and organizational support, should be the main goals of interventions aimed at enhancing work environments. Therefore, the goal of the current study was to compile the data regarding the connection between the work environment and nursing care quality (**Amaliyah, & Tukimin, 2021**). It has been demonstrated that nurse and patient outcomes are impacted by the state of nursing work settings. The American Association of Critical-Care Nurses (AACN) has long acknowledged the importance of healthy work environments (HWEs) in enabling nurses to contribute as effectively as possible to patient care. As such, the AACN has long pledged to make

HWEs a primary advocacy priority for the organization (Ulrich et al., 2022).

Collaboration and communication are essential for both nurse and patient outcomes as well as patient safety. The conclusion that raises the most concerns about the state of nurse work conditions is appropriate staffing (Montgomery, Patrician, & Azuero, 2022). The nursing shortage has become a significant issue for the industry. Improving staff nurse retention has always been a primary focus for nursing leaders due to its significant positive impact on patient safety and the organization's financial health (Li, 2022).

The personnel and resource adequacy dimensions had the lowest mean percentages, according to the current study's findings. This might be because there isn't enough staff to do the job, there weren't sufficient resources to give patients with high-quality care, and there aren't enough support services available to let nurses spend time with patients. This study confirms the findings of Fuseini et al. (2023), who discovered which the majority of nurses reported that there were insufficient nursing staff on their hospital units to oversee patient care. Moreover, the outcomes corresponded with those of Moisoglou et al. (2020), who examined the connection between environments of nurses' work and patients' quality of treatment. According to their findings, the parameters of personnel and resource adequacy had the lowest level of perception.

Additionally, Sosa-Palanca et al. (2022) found that the nurses in the study had a more positive opinion of staffing, believing that there were enough personnel to handle both patient care and the workload. This result, however, was in line with the findings of Olds, Aiken, Cimiotti, and Lake (2017), who investigated the impact of the safety atmosphere and nurse work environment on patient mortality and discovered that the subscale staffing and resource sufficiency had the lowest mean score. Also, this finding was incongruent with Khalifa, and Zahran (2019) who showed that the majority of staff nurses agree about using extra staff more than what is needed for patient care. Additionally, Mhdawi et al. (2020), Lee, Kang, Hyun (2019), and others discovered a positive correlation between elements of patient safety such as working environment quality, communication, frequency of adverse events, and managers' approaches, and elements of the working environment such as leadership, nursing care, and resource adequacy. However, Kirwan, Matthews, and Scott (2013), whose research focuses on a review of the relationship between the safety of

patients and the nursing work environment, discovered that the impacts varied among studies, which could be explained by the variable working environments in various hospitals and nations.

One of the most important characteristics of magnet hospitals is the positive working relationships between physicians and nurses. They are related to the nurses' perceptions of structural empowerment. Nurses are more empowered when they are provided with "opportunities to learn and grow in their work setting" (Moore, Jairath, Montejo, O'Brien, & Want, 2023). High nurse satisfaction and low staff turnover were associated with effective nurse-physician collaboration, which improved the practice's quality for patients and staff alike. Nurse-physician collaboration impressions are utilized in the same work unit and bear some similarities to the nurse-supervisor interaction Al Otaibi and colleagues, 2023).

Findings of the present study revealed more than half of the studied staff nurses are agree for collegial nurse-physician relations. This may be due to in Dawadmi General Hospital nurses and physicians working as a team and this encourages effective communication, collaboration, and decision-making, along with recognition of everyone's contributions. Monfre et al. (2022) study, which examined the impact of nurse-physician relationships on the quality of nursing care at the unit level and individual achievements, supports this. It found that the more collegial the connection between the two, the fewer patient complaints there were. In order to accomplish healthcare goals, it is advised that nurses, other members of the healthcare team, patients, and families collaborate, as stated by Cassidy (2019). Hospitals and healthcare systems are relationship-based human systems. However, Kaifi et al. (2021) discovered that nurses' perceptions of inter-professional collaboration were noticeably superior to those of doctors.

Again, the findings of the present study regard collegial nurse-physician relations as the majority of study nurses stated that they had strong teamwork and collaboration between nurses and physicians, according to a characteristic of the nursing work environment. This could be because the two primary healthcare professional groups that provide direct inpatient care are nurses and physicians. Doctors and nurses converse with each other. This is in line with the findings of Piper-Vallillo, Zambrotta, Shields, Pelletier, and Ramani (2023), who stressed the value of physician-nurse collaboration and inquired as to whether poor communication between the two has

been associated with unintentional patient outcomes, particularly extended hospital stays and harm to patients from treatment errors and delays. As **Cho and Han (2018)** study findings revealed collegial nurse–physician relationships are an important aspect of perceived patient safety.

Safety is a key and necessary component of providing quality patient care. A wide range of actions, including performance improvement, infection control, safe use of medications and equipment, safe clinical practice, and a safe environment, are required to ensure healthcare safety. A broad multimodal strategy from all healthcare disciplines and actors is seen to be critical for identifying and addressing possible threats to patient safety (**Muftawu & Aldogan, 2020**). A patient safety culture is typically defined as "the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine an organization's commitment to, and the style and proficiency of, health and safety management" (**Ree & Wiig, 2019**). The majority of the nurses under investigation had an average level of patient safety culture, according to the study's findings. The hospital's management may be to blame for this by demonstrating that patient safety is a top priority and creating a work environment that supports it; staff nurses are free to speak up about actions that could have a negative impact on patient care; nurses are informed about errors that occur in the unit and discuss strategies to prevent errors from happening again; managers ignore routine patient safety issues and encourage work to be done in accordance with established patient safety procedures; and nurses actively work to improve patient safety. This result is agreed with **Sani, Jafaru, Ashipala, and Sahabi (2024)** who studied the influence of work-related stress on patient safety culture among nurses in a tertiary hospital: a cross-sectional study reported that the highest percentage of the nurses practiced a moderate safety culture. Furthermore, **Mrayyan (2022)**, evaluated patient safety culture determinants and outcomes through a cross-sectional comparison analysis, concluding that nurses' perceptions of the culture were generally positive and patient safety was modest. Strengths in patient safety procedures should be preserved, and problems should be identified, addressed, and fixed right away. Improving patient safety procedures is crucial to enhancing patient safety culture and clinical outcomes, and assessing patient safety culture is the first step in improving hospitals' overall performance and service quality.

As well as this finding is similar to **Muftawu and Aldogan (2020)** who displayed that more than half of respondents perceived that overall response of the dimensions of patient safety culture was positive. In addition to, **Hadad, Abd Elrhmaan, Ahmad, and Ali (2021)** in their study perceptions of staff nurses about patient safety culture at Minia General Hospital and stated that the highest percentage of staff nurses had moderate total scores regarding patient safety culture.

In addition, this result was identical with **Abdelaliem and Alsenany (2022)** who studied factors affecting patient safety culture from staff nurses' perspectives for sustainable nursing practice and found that most staff nurses had a high perception regarding patient safety culture. On contrary, **Attalah and Wazqar (2024)** studied patient safety culture predictors and outcomes for sustainable oncology nursing practice in Saudi Arabia and reported that the level of patient safety culture was lower than expected.

Because their job requires constant patient monitoring and care coordination, nurses are essential to guaranteeing patient safety. To deliver high-quality patient care, a team-based nursing care approach is required (**Kyriacou Georgiou, et al., 2021**). The results of this study showed that the majority of the nurses who were surveyed stated that they provide professional healthcare as a team. The reason behind this could be that nurses help each other out on the unit, show each other dignity, and collaborate to do tasks efficiently. This finding in the same line with **Albalawi, Kidd, and Cowey, (2020)** applied a systematic review on factors contributing to the patient safety culture in Saudi Arabia and found that good teamwork within a unit was reported as a strength factor because healthcare professionals perceived it as enhancing patient safety culture.

Also, **Rajalatchumi et al. (2018)** studied the perception of patient safety culture among healthcare providers in a tertiary care hospital in South India and reported an average positive response rate in more than half of their nursing respondents, and the dimension of teamwork within the unit showed the highest positive response. Also, this result was in the same line with **Muftawu and Aldogan (2020)** in Ghana, who found that the teamwork within units was the dimension with the highest positive composite score and represented an area of strength.

Moreover, this result is agreed with **Muftawu and Aldogan (2020)** who had a study for measuring patient safety culture from healthcare team at a teaching hospital in Ghana and agreed

that teamwork within units was the dimension with the highest positive composite score. And this suggests that staff in the hospital support and treat one another with respect and support each other.

On the other side, this finding disagreed with **Khoshakhlagh et al. (2019)** who found that teamwork within the units was the lowest mean score. Based on their results, they assured that there is a need to pay more attention to improving the patient safety culture. As well as **Attalah and Wazqar (2024)** studied patient safety culture predictors and outcomes for sustainable oncology nursing practice: A cross-sectional correlational study in Saudi Arabia and concluded that teamwork within the units' dimension at low level that need strengthen.

Finding of the present study revealed that organizational learning had the second highest percentages of nurses' perception of patient safety culture. This may be due to continuous improvement in nurse's performance which is crucial for patient care and patient safety. This outcome can be explained by the fact that staff nurses actively worked to enhance patient care and safety; they also positively learned from their mistakes to perform better, and their supervisors continuously assessed their work. According to **Hadad et al. (2021)**, "Perceptions of Staff Nurses about Patient Safety Culture at Minia General Hospital," most staff nurses gave patient safety culture good overall scores for the organizational learning dimension. This study confirms those findings.

This outcome is consistent with a hospital survey on patients' safety culture conducted by **Alahmadi (2010)** in Saudi Arabia. According to the study's findings, most hospitals excelled in areas related to organizational learning and continuous development. Conversely, **Granel, Manresa-Domínguez, Barth, Papp and Bernabeu-Tamayo (2020)** discovered that organizational learning and continuous improvement had the lowest positive response rate when they examined patient safety culture in Hungarian hospitals. Therefore, they suggested that to assess potential future patient safety initiatives and to foster a more positive patient safety culture in Hungary, it is imperative that useful information be made available.

Once more, the study's findings showed that hospital-based patient safety cultures are perceived as having the highest level of positivity. This may be because staff nurses are required to receive ongoing education and training on safety measures for initial training, including effective

communication and infection control training. This is consistent with the findings of **Alrabae, Aboshaiqah and Tumala (2021)**, who investigated the relationship between self-reported workload and perceptions of patient safety culture. They found that a good view of organizational learning for continuous improvement was reached when participants actively engaged to enhance patient safety. Additionally, **Granel, Manresa-Domínguez, Barth, Papp, and Bernabeu-Tamayo (2020)** discovered that organizational learning and continuous improvement had the lowest favorable response rate when they examined patient safety culture in Hungarian hospitals. Accordingly, they proposed that meaningful data be provided to evaluate forthcoming patient safety efforts and promote a more positive patient safety culture in Hungary.

Results from current study demonstrated that positive perceptions of nurses' patient safety culture were minimal when it came to handoffs, transitions, and non-punitive responses to error aspects. Important patient care information is frequently lost during shift changes; therefore, this could be the result of not having enough people on hand or not having enough time to execute a proper handoff. Additionally, hospital patients have difficulties with shift changes. Employees also harbored a bad impression that their faults would be used against them. They were concerned that since mistakes were recorded in their personnel file, they would face consequences if they reported problems.

This conclusion was reaching agreement with **Granel et al., (2020)** as they studied nurses' opinions of patient safety culture, and a negative perception was observed related to handoffs and transitions and non-punitive response to error dimensions. This means that necessary steps were not taken to stop mistakes from happening again, and there were insufficient resources to implement and assess preventative measures to avoid mistakes.

According to **El-Sherbiny, Ibrahim, and Abdel-Wahed (2020)**, there is a need for development since the nurses under study exhibit a bad culture with regards to non-punitive responses to errors, handoffs, and transitions. Furthermore, **Alquwez (2018)** stated that handoffs and transitions were shown to be weak points in patient safety. Therefore, it is advised to create a setting in which nurses have the freedom to express their thoughts to protect patients from damage without fear of repercussions in high-risk situations.

According to the study findings, around 50% of the nurses who were surveyed said they thought open communication was a good thing. This could be the case because they are comfortable discussing patient safety or safety with other medical professionals and management in their teams by keeping lines of communication open with their boss and supervisor. This conclusion was at odds with the findings of **Alshyyab et al. (2022)**, who discovered that the unit-level communication openness personnel had the lowest mean score. Furthermore, nurses in **Cardiff, Sanders, Webster, and Manley (2020)** study in the Netherlands reported feeling that there was a high degree of feedback and communication on errors. They suggested that in creating workplace cultures, greater focus should be placed on figuring out what functions effectively and what needs to improve.

Inadequate staffing occurs when there are not enough personnel in the nursing unit to provide care for the patients (**Marufu et al., 2021**). According to the study's findings, most respondents thought favorably of Dawademy Hospital's staffing levels. This could be the result of having enough workers to handle the workload and scheduling conflicts that prevent patients from receiving the best care possible. This disagreed with **Fuseini et al. (2023)**, as they found that most of the nurse declared that their hospital's units do not have suitable nursing personnel to operate patient-safety-related duties. Furthermore, this study confirms the findings of **Alswat et al. (2017)**, who looked into ways to enhance Saudi Arabia's patient safety culture. They discovered that although the majority of staff nurses thought it was crucial to have enough workers to handle workloads, more than half of them believed that staffing improved patient care.

6. Conclusion & Recommendations

The study's conclusion is that the environment in which nurses practice has a big impact on preserving patient safety culture. Therefore, the current study established that improving nursing practice environments could improve patient safety culture by increasing care safety and decreasing adverse events through the provision of sufficient staffing and resources, promoting teamwork and decision-making participation, and offering suitable incentives. Suggestion: To create a safe and healthy environment for patients, nurses would monitor and then assess several components of the patient safety culture.

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