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# An Investigation of Factors Affecting Patient Safety in Emergency Department in Selected Hospitals in UAE

## BY

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***Abstract***

*The core reason of performing this study is to analyze the aspect of patient safety in the Emergency Department. Therefore, the study focuses on evaluating the patient safety applications and regulations in the hospitals of the UAE along with the factors that affect it. This research has been done following the quantitative research method and the data collection method used in this study is primary, which means that all of the data and information has been gathered on a personal basis. Moreover, the tool used to collect the dataset is an online survey which was conducted among the healthcare consultants and the hospital staff in the United Arab Emirates (UAE). Since the study is quantitative, it has been analyzed statistically using SPSS and the tests run on the data are the regression analysis, descriptive statistics, and correlation. According to the findings of the study, patient safety is highly dependent on the services of healthcare providers as this factor casts a huge impact on the patient safety. Other than this, there is also a second factor which is the environment of the hospital that influences the safety measures of the patient in a hospital. Based on the results of the statistical analysis performed in the research it can be claimed that there is an extremely close relationship between both of these factors to the patient safety.*

## INTRODUCTION

Patient safety can be referred to as getting freedom from any illness related to well-being. All the health setups are supposed to make policies and strategies for improvement related to patient safety (Amaniyan et al., 2020).

According to the statement of the World Health Organisation, a Patient Safety Incident is any uncertain situation or event which could result in harm to the patient. According to the report of the International Classification for Patient Safety, each event group is categorised into more than one disease related to one PSI event. For instance, a classification of clinical Procedure event type might be considered as a form of Medication or arterial fluids. However, unfavourable conditions are known as an incident type. This also includes a reaction to any medication that can cause an adverse effect, relying upon a classification of Patient Safety Incidents (PSI). PSI shows an essential portion of the reasons for illness and causes of death in any healthcare setup. Additionally, the psychological pressure or anxiety of a patient and his relatives could be an essential contributor to PSI. In relation to this, the pressure on Health care practitioners might be an essential participant in PSI. According to a recent report, the range of occurrence of PSI in hospital-admitted patients in Canada and the United States varies from 2.9% to 16.6% (Stephen et al., 2021).

Moreover, in Emergency Departments, the necessity to advance patient safety should be considered an essential responsibility (Amaniyan et al., 2020). According to the report of the 1999 Institute of Medicine, the safety of health care setups is called Emergency Departments. These departments are named unsafe places for the hospital setups. Moreover, 70% of emergency department-based faults were believed avoidable. Emergency care Departments are usually underfunded, overloaded, and highly uneven at the breaking point. According to the American College of Emergency Physicians, a national crisis of emergency department of health care has been reported. In addition to this, the shortage specifically of access to health care, safety, and quality of emergency care environment has been reported. It identifies leakage and deficiencies in the hospital liability environment, prevention of disease, and public health of Emergency departments across the world. The safety and quality of

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emergency care departments are affected by countless internal and external factors (Diz and Lucas, 2022).

The shortage of on-call healthcare professionals and the lack of bed capacity in a hospital setup falls into external forces which affect the quality of emergency care departments. The necessary initiatives of safety, like antibiotic administration within a specific time for pneumonia patients, include external forces. If these initiatives have bad validity and poor alignment with a good emergency department practice, they might contribute to a bad emergency care department by turning limited key sources. The emergency department has turned out more complex by overburdened conditions, overloaded patient flow, and a complicated population of patients comprised of deprived, financially weak, low education levels and psychiatric issues (Althobaiti et al., 2022). Furthermore, the leading contribution of a high-risk environment includes crowding of the environment, stress, and pressure on production. Specific patients like heart failure and congestive patients put pressure, which contributes to high-risk surroundings.

Patient safety incidents grip particularly right in the emergency departments and put overburden. In relation to this, fast-growing health care setups with more rate of work disruptions and complicated and distracted communication places. In severe cases, healthcare practitioners are responsible for treating all patients. Emergency departments having a high risk of Patient Safety Incidents are challenging departments. The essential key role of ED is the quality and safety of health care practitioners, staff, and quality care employees are responsible for taking challenges by state initiatives and patient safety (Alsabri et al., 2022). Patient safety incidents arise in every event in the emergency care department comprised of Medication, treatment, diagnosis, procedures, and communication. It has been stated that 6% and 8.5% of emergency care department patients are experiencing PSI, of which 36% to 71% are avoidable (Amaniyan et al., 2020).

Furthermore, since the year of 1990, more attention has been provided to patient safety. The patient safety reports and studies stated that the amount of medical mistakes and avoidable damage is still underserved (Al Owad et al., 2022). After the appearance of these studies, many departments initiated to take responsibility for their safety problems. Emergency Medicine distinguished many problematic areas and tried to resolve the epidemiology mistakes among the several specialities. According to the reports of 62 Urban Emergency Departments, they found that 7% of myocardial infarction, asthma exacerbations, and dislocated joint patients require reduction with medicated sedation acknowledged many adverse effects. The study stated that 12% of emergency department return visits are concerned with adverse effect events.

Moreover, it has been observed that the risk of harm is knowingly contributed by the setup of emergency departments. Additionally, proper documentation could help in improving patient care as it supports reducing the level of risks. In emergency care departments, patients can come at any time during the whole day, whether it is day or night when there is no source of treatment available. Emergency Care Physicians are responsible for treating myocardial infarction, sepsis, stroke, and respiratory problems first rather than treating other normal diseases of different ages patients. The finding and treatment of disease are complex for many emergency care department patients. The setups of ED are fast-paced and need fast thinking, a huge amount of medical knowledge about a disease, and skills to treat severe conditions (Amaniyan et al., 2020). More often, in the emergency department, patients visit the hospital with incomplete profile data. In relation to this, patients do not know about their findings or disease and are sometimes unable to communicate their problems. These conditions can lead to an increased risk of damage and an adverse effect event. In addition to emergency care departments, these are mostly overcrowded and overburdened due to uncountable patient flow. Emergency departments with a limited number of beds in hospitals and limited staff need an active solution to resolve these issues for new patient visits. Hence, this is a trending.

**Problem Statement**

The main problem statement which is being considered through this research is about the practices that can help patient safety to be improved in emergency departments. There is a lack of research on this topic as most of the previous researchers have focused on patient safety in overall healthcare units. There are very few researchers available that put an emphasis on one particular and critical department. It is critical to understand these factors as these can help to improve the overall quality of the emergency department in hospitals in UAE further.

**Research Aim:**

The main aim of this research study is to analyse the aspect of patient safety in the Emergency Department. It has been conducted to understand various applications of patient safety protocols in the hospitals of UAE to recognise the factors that are contributing to it in the emergency department. Furthermore, the research also envisions providing some recommendations that can improvise patient safety in the emergency department contributing to the overall growth of the UAE hospitals.

## LITERATURE REVIEW

**Patient Safety**

In order to not harm the first rule, it is essential to guarantee the security and calibre of the medical treatment. To be more precise, patient safety is the absence of mistakes and negative health effects (Choudhury and Asan, 2020). In addition, the first time a worldwide movement for patient safety was reported by the Institute of Medicine (IOM) in 1999 (Dhingra-Kumar et al., 2021). Furthermore, patient harm continues to be a daily issue in healthcare systems all over the globe, despite some progress. While persistent issues are still unresolved, graves of new dangers are now becoming apparent. Therefore, patients face new difficulties as they get

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older. In addition, they have more complex needs and frequently have multiple chronic illnesses. Additionally, new therapies, technologies, and treatment modalities have great potential, but they also come with new risks (Choudhury and Asan, 2020). All stakeholders, including patients and healthcare workers, must be involved in providing the treatment in these settings, and all levels of health system leaders must be fully committed.

Many nations have now acknowledged the safety of the patients. The Global Alliance for Patient Safety of the World Health Organization is spreading awareness all over the world (World Health Organization, 2019). However, there are still a lot of obstacles to overcome in order to execute patient safety policies and procedures. However, the concerned leaders in the field develop and share models for patient safety. But as of right now, there is not a single version that could be an aid in fully implementing patient safety throughout the complete healthcare system (World Health Organization, 2019). In this article, the researcher defines, describes, and ultimately models the safety of the patients after outlining the main ideas of an intelligent patient safety story. Furthermore, the researcher also urges businesses to embrace patient safety definitions and models.

The primary causes of Emergency Room overcrowding are the hospitalised patients who are waiting for the beds and hospital facilities which explains why interventions aimed at reducing the motions in emergency departments. It also has little impact on the overall hospital environment (Sartini et al., 2022). This is due to so many “non-urgent" patients who will require hospitalisation. It also triages non-urgent patients, which has little effect on flow and is a patient safety issue. As a result of increased emergency room capacity, the number of patient appointments increased rather than decreased, further taxing the already overworked staff (Sartini et al., 2022). While adding more staff to the inpatient unit may alleviate the burden of the nursing staff in the emergency room. It could also help in the accommodation of patients but may still result in space constraints that limit the emergency room's ability to accept new patients.

***Patient Safety Protocols***

Patient safety is one of the most concerned topics in today’s world because it is frequently reliant on healthcare workers (Murray et al., 2019). In addition to systemic failures, flawed organisational processes and mismanagement are also affected by healthcare workers. Based on the premise that numerous studies have shown that artificial failures in healthcare workers' communication, teamwork, and mental health are also the cause of failures in patient safety. Therefore, improved training of these professionals is required to change habits and practices.

Evidence-based training covers clinical recommendations, adverse events, service delivery techniques, improving working conditions, ongoing advice on infection control procedures, and improving psychological and emotional support for healthcare employees. Furthermore, occupational well-being, depression, anxiety, and burnout syndromes are the deciding factors in the care given to patients despite their differences. There is a known link between poor health and moderate to high levels of burnout, as well as poor patient safety and care errors. This is due to the healthcare and educational workers who frequently experience occupational stress. Burnout is a disease that is closely linked to working conditions (Guixia and Hui, 2020). As a result, the condition of overstress in these workers is being thoroughly researched. During working hours, health professionals frequently experience burnout, which prevents them from providing effective nursing care and may harm both patients and the healthcare system as a whole (Guixia and Hui, 2020).

At least one of the three major regions was responsible for 30 percent of the prevalence among nurses, which includes depersonalisation, emotional exhaustion, and low professional achievement (Alanazi et al., 2021). In the interest of patient safety, the organisational, social, and personal issues that rely on financial and human resources can be resolved. Physical, organisational variables, interpersonal interactions, and other burnout-related characteristics are all interconnected (Alanazi et al., 2021). Moreover, adverse events were defined as the potential problems with the care of patients caused by errors that are not inherent in the natural progression of diseases.

The stress that operational errors places on patients, their families, and the healthcare system can be lessened by putting into practice patient safety principles founded on quality improvement and prevention strategies. A sound healthcare system that reduces the incidence and effects of adverse events by maximising recovery from such events is built by using patient safety principles (Harding et al., 2020). Moreover, these principles can be broken down into risk management, infection control, drug treatment, safe environments, and equipment, patient education and involvement in their care, prevention of pressure ulcers, nutrition improvement, leadership, teamwork, knowledge development through research, responsibility, and accountability, as well as reporting practice errors (Harding et al., 2020).

In both short-term and long-term care settings, a nurse is responsible for keeping patients safe and avoiding harm. These responsibilities could be done by assessing patients, planning care, supervising and monitoring activities, reviewing, providing care, and interacting with other healthcare professionals. Nurses must adhere to the organisational policies to spot hazards and risks. The success of interventions to prevent practice errors and develop resilient and safer healthcare systems depends on the dedication of nurses to patient safety. In addition, clear policy, leadership, safety research initiatives, health worker education, and patient involvement in the role of these dedicated nurses (Malloggi et al., 2020).

The use of clinical guidelines by nurses is used to be influenced by individual variables such as attitudes, perceptions, expertise, and information seeking. This could compromise patient safety because of the inconsistent adherence to patient safety principles. However, it was

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evident that collaboration helped nurses adhere to patient safety standards. The commitment of nurses can be increased by improving their task expertise (Malloggi et al., 2020). As there is an agreement on the changes that all healthcare professionals need to make to improve the standard of care, a coordinated management strategy and collaboration with team members improve the effectiveness of patient safety interventions.

**Factors Impacting Patient Safety in Healthcare Institutions**

As per the research study by Titi et al. (2021), it has been analysed that **miscommunication** is a main factor that is poorly impacting patient safety in hospitals. Miscommunication among medical professionals is considered a significant cause of error among the influencing factors which is associated with patient safety.

This factor shows the significance of having communication skills training for healthcare workers (Albalawi et al., 2020). The training session could help the hospital staff in having a better understanding of how all primary care workers should interact with one another. Effective communication is considered one of the seven pillars of a safety mindset. Other initiatives that could be implemented and evaluated in hospitals are encouraging learning through games and simulations while conducting medical research to improve healthcare relationship skills. Some standardised tools, such as situation, background, assessment, and recommendation (SBAR), can be used in hospitals to teach primary care workers how to better organise their communication (Supriadi et al., 2020). SBAR helps in improving the verbal communication of hospital staff with patients, which ultimately helps in improving the level of patient safety. In addition to this, patients must take the lead in ensuring their own safety. Patients should have access to similar tools so that they can interact with experts more effectively. When used in primary care, these standardised communication tools may reduce the number of patient safety incidents (PSIs). Therefore, communication is considered the main factor which immensely affects the factors that impact patient safety in hospitals.

As per the research study of Chaneliere et al. (2018), it has been determined that **minor errors in the emergency departments** of hospitals can result in serious issues with diagnosis or treatment. It has been analysed that almost 17% of PSIs are usually associated with errors in knowledge and skills, while 30% are associated with a lack of knowledge or skills.

One of the main factors that affect patient safety in healthcare institutions is the **shortage of skilled staff.** The retention rate of hospital staff members is very low in healthcare institutions which has a negative impact on patient safety. As per the research study of Mitchel (2022), it has been evidently observed that almost 100,000 healthcare workers left their work during the timeframe 2019 to 2022, which results in additional burden and stress on nurses. Most healthcare institutions are facing a shortage of staff to handle the workload. In addition to this, the shortage of healthcare staff leads to errors and high rates of morbidity. This factor immensely affects the safety of the patients, which increases the rates of mortality.

**Factors Impacting Patient Safety in Emergency Department**

The Emergency Department delivers quick access to medical care services. Therefore, any faults and mistakes made by healthcare practitioners can cause a great risk of medical errors in the emergency care department of any healthcare setup. According to a survey conducted in Saudi Arabia from the year of 2011 to the year of 2015, the number of patients who visited the emergency care department was approximately 102.2 million (Almalki et al., 2019). The urgent and non-urgent medical decisions and actions that can be taken in the emergency department include inappropriate adverse effects and interventions. This can be considered as the outcome of incomplete medical history regarding the condition of the patient. A high level of advancement and modification can be proved by continued rounds instituted in healthcare setups.

According to a recent study on patient safety, it is stated that the care services given by emergency care departments are beyond their measures and capacity (Uppal et al., n.d). **Overburdened, overloaded work and shortage of emergency staff affect the routine of employees**. It also affects the delivery of quality care and patient safety. Moreover, the **overcapacity of patients** interrupts the workload of Emergency Department staff which ultimately make a contribution to medical faults and errors. According to a recent study, factors affecting attitudes and patient safety culture in the emergency department, around 23.4% of nursing staff came across an error causing patient safety in an emergency setup (Aydemir and Koç, 2023). It can be seen in any care department that medical faults and mistakes show lack of a culture of patient safety. According to the relative reports on the culture of patient safety perception in Turkey, the identification of the consciousness of patient safety culture has not been influenced in healthcare setups yet (Al Harbi et al., 2022). Therefore, the precautions related to patient safety are occupied with implementing protocols, and the culture of patient safety ranges from organisation to organisation.

Emergency physician and staff plays an essential key role in providing care and ensuring the patient safety culture. Since most of the time, staff members are in contact with patients within 24 hours (Al Harbi et al., 2022). The risk of emergency department shortage can be seen, and this initiates the faults and mistakes by the medical professionals.

**Patient Safety in UAE**

The United Arab Emirates (UAE) has implemented the digitisation of medical data to enhance health outcomes, just like other healthcare systems in other nations. Furthermore, the data indicate that nurses are usually satisfied with the use of electronic health records in their daily practice. Since 2008, electronic health records have been used in a variety of institutions throughout the United Arab Emirates (Bani Issa et

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al., 2020). All organisations stressed their dedication to maintaining and safeguarding patient clinical data as they made the switch from paper documents to the new digital documentation system. Moreover, all medical facilities in the UAE have embraced a local code of ethics that is based on the standards established by the International Council of Nurses (ICN) (Bani Issa et al., 2020). This outlines the moral and legal duties that nurses have to patients, their practices, their professions, and their co-workers. Federal organisations in the UAE are also conscious of the significance of stopping unauthorised access to an inappropriate sharing of medical data. They are also conscious about maintaining the confidentiality and security of online health data. For instance, healthcare providers must uphold the privacy, confidentiality, security, and appropriate protection of online health data in accordance with UAE federal legislation (Baker and Beeton, 2020). However, keeping the integrity of the data in the electronic health record may be difficult because it shows the diversity of the nurses and their cultural backgrounds in the UAE. Moreover, the nurses might not be acquainted with regional codes of conduct or the most recent rules and laws that govern the accuracy of online medical data (Baker and Beeton, 2020). For this purpose, it is crucial to handle the concerns of the nurses about the accuracy of patient data stored in electronic health records. This is due to the nurses could make up a sizable portion of the healthcare workforce in the UAE and around the world.

**Protocols for UAE Hospitals that lead to Patient Safety**

The main practice of patient safety in the emergency departments of UAE emphasises the need for quick diagnosis for treating serious conditions such as myocardial infarction, stroke, and sepsis has made it suitable (Bani Issa et al., 2020). Timeliness is not only a simple cause of patient acceptance, but it also plays an essential role in patient safety and quality concern. The delays in providing care are caused by a large amount of admitted patients who stay in emergency departments. This is considered one of the most avoidable issues regarding patient safety and quality care in emergency departments of UAE hospitals. In emergency departments, protocols have been taken by the management and administration to reduce the issues of patient safety. The management of UAE hospitals has taken some protocols for regular risk-conducting issues, such as finding possible errors and medical faults. The administration of the emergency care department is documenting and applying procedures and policies for identifying clinical damage. The document outlines all the necessary steps which have been taken by hospital staff to prevent all sorts of risks and errors. Moreover, another important protocol is that UAE hospitals should provide training to their staff regarding strategies and policies to implement patient safety and quality care (Alzahrani et al., 2018). It may include training on fall avoidance, safe treatment, and avoiding patient violence.

In emergency care departments, a standardised protocol for healthcare practitioner-to-clinician transition is essential to prevent opportunities for errors. The protocol should include proper actions and implementations for each step in the process of transition to evaluate the improvement areas in emergency care departments. When constructing a standardised protocol for the hospitals in UAE, four main steps are essential such as pre-transition, the arrival of a new healthcare professional, the initial clinical meeting, and post-transitions (Bani Issa et al., 2020). In relation to this, the pre-transition step includes an initial review of a healthcare practitioner about the patient and to take a final decision on the next steps for an oncoming doctor. The next stage includes initial and oncoming healthcare practitioner meetings. All the essential information that is communicated to oncoming professionals should be clear and follow the standard protocol. The last stage of this standardised protocol includes post-transitions. The hospitals in UAE can efficiently achieve this stage by oncoming healthcare professionals after finalising patient care to ensure medication and treatment plans.

Another main protocol for UAE Hospitals that lead to patient safety is implying effective communication between healthcare professionals, nursing staff, and patients. It might include an easy communication setup to safeguard the essential data communicated between staff members and doctors. The management of UAE hospitals may apply technologies to enhance the improvement regarding patient safety. It may comprise electronic medical file usage to improve patient safety standards (Harbi, 2021). In addition to this, the usage of monitoring and controlling systems may avoid falls and errors regarding patient safety. Another main protocol that could help the hospitals in UAE is that their management should take regular feedback from their patients to know the issues related to safety and quality. It may include data collection on adverse effect events and incidents; this information should be used for future improvements in patient safety.

It has been determined that tools and electronic systems can efficiently facilitate information sharing between healthcare professionals and patients (Cerchione et al., 2023). Electronic systems can also enhance adherence to patient safety principles in the workplace. The availability of suitable work tools is a duty of the healthcare system as it helps guarantee patient safety. By offering the ubiquitous, real-time documentation required for professional teamwork, technology can keep data secure and simple to manage. In addition to this, the implementation of digital systems by UAE hospitals can also help in speeding up the delivery of care, reduce medication errors, and boost nurse and patient satisfaction.

Another important protocol for UAE Hospitals that lead to patient safety is creating an atmosphere where healthcare providers such as nurses are less likely to be distracted and have less work to do. Increased patient safety and decreased burnout are both correlated with an ideal work atmosphere (Al Balushi et al., 2021). In addition to this, burnout and workload are detrimental to safe therapy. A decline in nurses' dedication to safety is linked to a work setting with a high workload, stress, and numerous distractions. Patient safety is related to the working conditions of nurses and their devotion to patient

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safety guidelines, as it could help in avoiding mistakes and unfavourable outcomes.

**Research Methodology**

This research used a **deductive approach** to test the gathered data against observations and then interpreted it to find the results**.** Quantitative research includes a huge amount of data which is based on the number of responses. An **explanatory research design** is used that helps the author to understand a particular problem by providing more data regarding the existing research. This research has used primary research for which the author has taken data through a **survey.** The Likert scale has been used to collect the data through. Moreover, the resulting outcomes are then interpreted by using SPSS.

**Data Collection**

This research has used **primary methodology** to get first-hand knowledge in this research. Thus, by considering the quantitative method the researcher used a survey technique by employing the Likert scale.

***Network of Respondents***

A survey was taken by various participants from the hospital staff and healthcare consultants from the UAE hospitals. A **simple random sampling technique** has been used in this research to collect the information to answer the research question.

## ANALYSIS AND INTERPRETATION

This section of the study elaborates on the findings and the result if the research. Therefore, it provides a detailed graphical representation of the survey conducted along with the interpretation of the tests run on the data, which are the regression analysis, descriptive statistics, and correlation. Other than this, it also lay out a discussion in the light of literature with the view to identify the similarity and contradiction in the findings if this study and the literature on the subject.

### 4.1 Demographic Data Analysis

Table 1:Demographic analysis

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| 1. Gender | 100 | 1.0 | 3.0 | 1.710 | .6403 |
| 2. Age | 100 | 1.0 | 5.0 | 2.500 | 1.2513 |
| 3. Work Experience | 100 | 1.0 | 5.0 | 2.480 | 1.2671 |
| Valid N (listwise) | 100 | | | | |

In the table above, it can be seen that the total number of participants of the survey were and it represents that most of the respondents were females because while the rest of the population were either male or did not prefer to say specify their gender. Moreover, the survey was conducted among the young population, which is why the majority of the participants belonged to the age group of 21-30. In addition to this, with the view to include opinions from a wide range of experienced people, it includes the people with different numbers of years of experience. However, most of the people had around 2-4 years of experience.

**Descriptive Statistics**

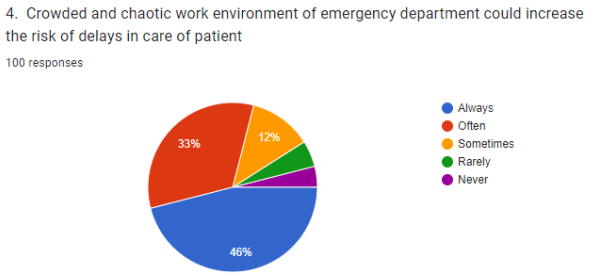


***Figure 1:The crowded and chaotic work environment of the emergency department could increase the risk of delay in care of the patient.***

The majority of the participants with the ratio of 46% believed that the above statement always occurred, 33% often experienced the scenario, 12% sometimes had to face the situation in the above statement. Overall, the results showed that the above statement is a usual situation in the emergency department.

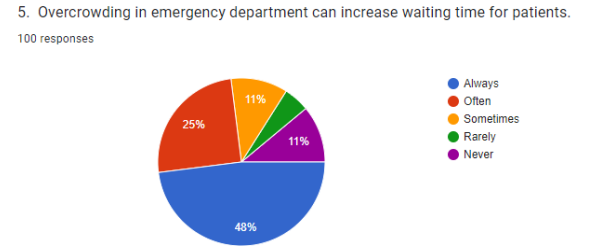


*Figure 2:Overcrowding in the emergency department can increase waiting time for patients*

The majority of the participants with the ratio of 48% believed that the above statement always occurred, 33% often experienced the scenario, 11% sometimes had to face the situation in the above statement, while 11% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

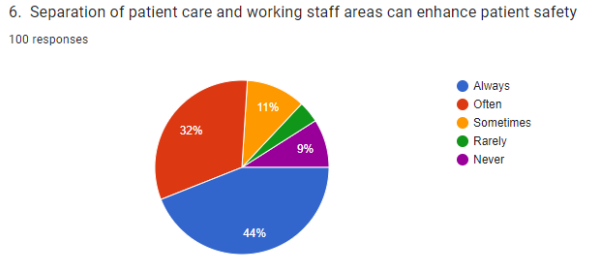


***Figure 3: Separation of patient care and working staff areas can enhance patient safety.***

The majority of the participants with the ratio of 44% believed that the above statement always occurred, 32% often

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experienced the scenario, 11% sometimes had to face the situation in the above statement, while 9% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

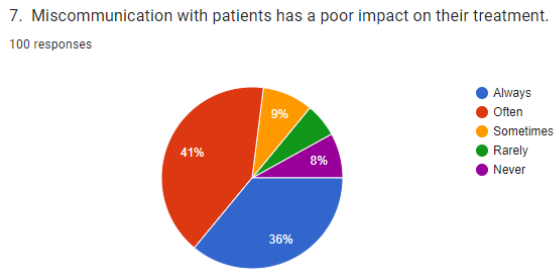


***Figure 4; Miscommunication with patients has a poor impact on their treatment.***

The majority of the participants with the ratio of 41% believed that the above statement often occurred, 36% always experienced the scenario, 9% sometimes had to face the situation in the above statement, while 8% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

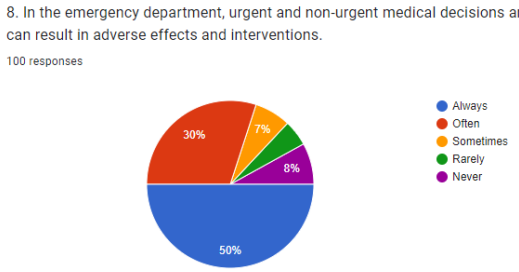


***Figure 5:In the emergency department, urgent and non-urgent medical decisions and actions can result in adverse effects and interventions.***

The majority of the participants with the ratio of 50% believed that the above statement always occurred, 30% often experienced the scenario, 7% sometimes had to face the situation in the above statement, while 8% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

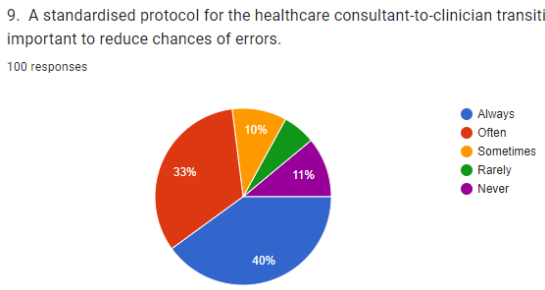


***Figure 6: A standardised protocol for the healthcare consultant-to-clinician transition is important to reduce the chances of errors.***

The majority of the participants with the ratio of 40% believed that the above statement always occurred, 33% often experienced the scenario, 10% sometimes had to face the situation in the above statement, while 11% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

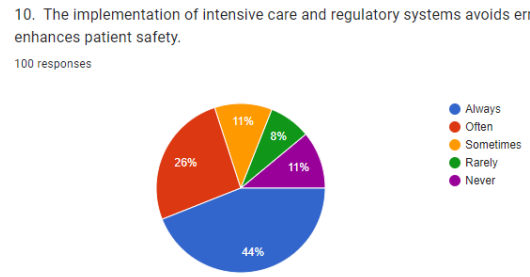


***Figure 7: The implementation of intensive care and regulatory systems avoids errors and enhances patient safety.***

The majority of the participant with the ratio of 44% believed that the above statement always occurred, 26% often experienced the scenario, 11% sometimes had to face the situation in the above statement, while 8% rarely gone through it; however, 11% never experienced such situation. Overall, the results showed that the above statement is a usual situation in the emergency department.

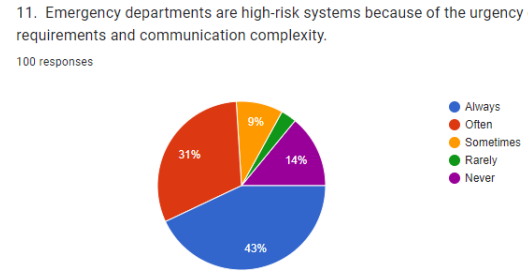


***Figure 8: Emergency departments are high-risk systems because of the urgency of care requirements and communication complexity.***

The majority of the participants with the ratio of 43% believed that the above statement always occurred, 31% often experienced the scenario, 9% sometimes had to face the situation in the above statement, while 14% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

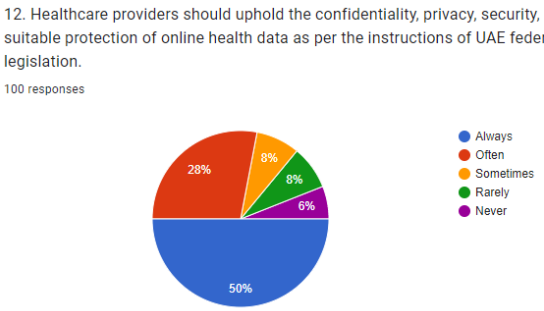


***Figure 9: Healthcare providers should uphold the confidentiality, privacy, security, and suitable protection of***

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***online health data as per the instructions of UAE federal legislation.***

The majority of the participant with the ratio of 50% believed that the above statement always occurred, 28% often experienced the scenario, 18% sometimes had to face the situation in the above statement, while 8% rarely gone through it; however, 6% never experienced such situation. Overall, the results showed that the above statement is a usual situation in the emergency department.

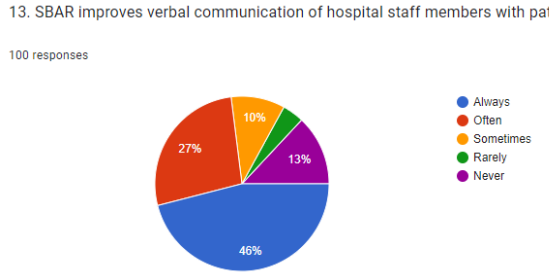


***Figure 10: SBAR improves verbal communication of hospital staff members with patients.***

The majority of the participants with the ratio of 46% believed that the above statement always occurred, 27% often experienced the scenario, 10% sometimes had to face the situation in the above statement, while 13% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

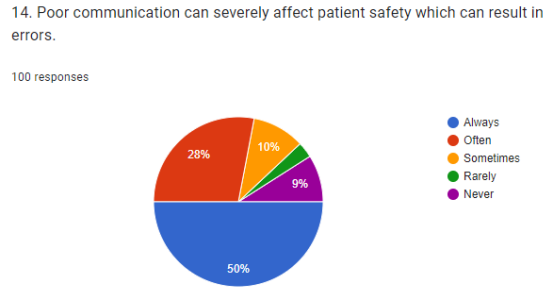


*Figure 11: Poor communication can severely affect patient safety which can result in medical errors*

The majority of the participants with the ratio of 50% believed that the above statement always occurred, 28% often experienced the scenario, 10% sometimes had to face the situation in the above statement, while 9% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

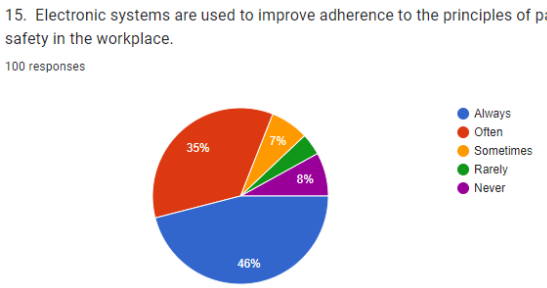


*Figure 12: Electronic systems are used to improve adherence to the principles of patient safety in the workplace.*

The majority of the participants with the ratio of 46% believed that the above statement always occurred, 35% often experienced the scenario, 7% sometimes had to face the situation in the above statement, while 8% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

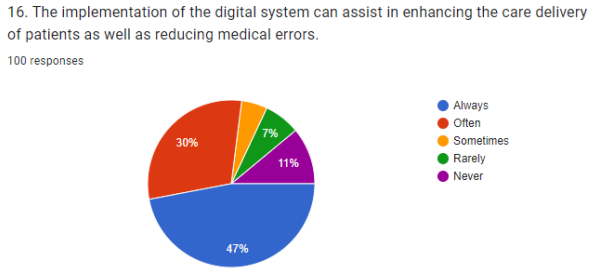


*Figure 13; The implementation of the digital system can assist in enhancing the care delivery of patients as well as reducing medical errors*

The majority of the participant with the ratio of 47% believed that the above statement always occurred, 30% often experienced the scenario, 7% rarely had to face the situation in the above statement, while 11% never gone through it. Overall, the results showed that the above statement is a usual situation in the emergency department.

## Inferential Statistics

***Regression Analysis***

Regression analysis is a trustable method to recognize the factors that have an influence on the topic of interest. The motive behind using regression in this research is that it tells about the relationship between two or more variables along with its strength. In this research, there are three variables, which are the patient safety, healthcare provider, and the environment of the hospital. Among these three variables, healthcare providers and the environment of the hospital are the independent variables, while patient safety is dependent on these two variables. The regression analysis below describes the relationship between these dependent and independent variables separately.

***Table 3: Model Summary for healthcare provider***

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. The error in the Estimate |
|---|---|---|---|---|
| 1 | .758[a] | .574 | .570 | 2.12487 |

a. Predictors: (Constant), Health_Care_Provider

***Table 4: ANOVA for healthcare provider***

**ANOVA[a]**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|

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| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Regression | 596.275 | 1 | 596.275 | 132.064 | .000[b] |
| | Residual | 442.475 | 98 | 4.515 | | |
| | Total | 1038.750 | 99 | | | |

a. Dependent Variable: Patient_Safety

b. Predictors: (Constant), Health_Care_Provider

Table 5: Coefficients for healthcare provider

**Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.619 | .518 | | 5.054 | .000 |
| | Health_Care_Provider | .528 | .046 | .758 | 11.492 | .000 |

a. Dependent Variable: Patient_Safety

Tables 3, 4, and 5 provided above lays out the regression analysis for patient safety. According to the analysis, the relationship between the two variables is extremely close as the significant value of the linear regression mentioned in Table 4 is zero. In addition to this, table 3 also shows the values of R and R square, which signifies that the future trends of patient safety can be predicted by analysing the services of healthcare providers in the hospital in simple words, as the services of healthcare providers in the hospitals would improve it would ultimately enhance the patient safety. This means that with the view to enhance patient safety in the hospital, it is a vital practice adopt to regularly examine the services of healthcare providers in the hospitals so that the efficiency and effectiveness of the healthcare providers would be maintained while ultimately maintaining patient safety.

***Table 6: Model Summary for Environment of the Hospital***

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. The error in the Estimate |
|---|---|---|---|---|
| 1 | .636[a] | .405 | .399 | 2.51135 |

a. Predictors: (Constant), Envioronment_of_the_Hospital

Table 7: ANOVA for the environment of the hospital

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 420.676 | 1 | 420.676 | 66.701 | .000[b] |
| | Residual | 618.074 | 98 | 6.307 | | |
| | Total | 1038.750 | 99 | | | |

a. Dependent Variable: Patient_Safety

b. Predictors: (Constant), Envioronment_of_the_Hospital

Table 8: Coefficients for the environment of the hospital

**Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.363 | .626 | | 5.370 | .000 |
| | Envioronment_of_the_Hospital | .584 | .072 | .636 | 8.167 | .000 |

a. Dependent Variable: Patient_Safety

In the above three tables, the linear regression for the other independent variable, the environment of the hospital is presented. Considering that the significant value of ANOVA mentioned in Table 7 is zero, it is safe to say that there is a strong relationship between the environment of the hospital and patient safety. However, the value of R square is calculated to be 0.405, which is less than 0.5. this indicates that even though the relation between the two variables is extremely close and the strength is high, it would not be possible to forecast the situation of patient safety by analysing the environment of the hospital alone. Therefore, the result of the linear regression analysis of the data gathered has helped in identifying that in order to ensure and improve patient safety, it is necessary that the environment of the hospital is kept positive and highly motivated, yet it would not provide much of assistance in anticipating the future situation of the patient safety.

***Correlation Analysis***

Table 9: Correlations

**Correlations**

| | | Patient_Safety | Health_Care_Provider | Envioronment_of_the_Hospital |
|---|---|---|---|---|
| Patient_Safety | Pearson Correlation | 1 | .758** | .636** |
| | Sig. (1-tailed) | | .000 | .000 |

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| | | | | |
|---|---|---|---|---|
| | N | 100 | 100 | 100 |
| Health_Care_Provider | Pearson Correlation | .758** | 1 | .744** |
| | Sig. (1-tailed) | .000 | | .000 |
| | N | 100 | 100 | 100 |
| Envioronment_of_the_Hospital | Pearson Correlation | .636** | .744** | 1 |
| | Sig. (1-tailed) | .000 | .000 | |
| | N | 100 | 100 | 100 |

**. Correlation is significant at the 0.01 level (1-tailed).

The rationale behind using the correlation is that it is a statistical technique to assess the relation between the random variables present in a dataset. Even though the correlation does not necessarily imply that if one of the two variables would be changed for any given reason, then the other variables would also be affected by it, the analysis does elaborate on the relationship to be positive or negative. In this research, the Pearson correlation has been calculated while using the one-tailed method. The reason for this is that it was the most suitable and best strategy to evaluate the answers to the research questions as it majorly helps in measuring the strength of the relationship. The value of correlation varies from -1 to 1 and as mentioned in Table 9, this value of the dependent variable, patient safety for the first independent variable, healthcare provider 0.758, and for the second independent variable, the environment of the hospital is 0.636. this shows that the relationship of the patient safety to a healthcare provider is greater than that of the environment of the hospital. Nonetheless, the relationship with both of the independent variables is positive. This means that both of these variables influence the dependent variable in a direct and positive manner.

## Discussion of Findings

The findings of the research claim that the services of healthcare providers and the environment of the hospital cast a prominent impact on patient safety. This result of the study is also supported by the research available in the literature on the subject. According to the study by Supriadi et al. (2020), SABR can prove to be an extremely beneficial tool for enhancing the verbal communication skills of the staff in the hospital which would help in increasing patient safety. This statement is confirmed in this study as well as the healthcare consultants in the UAE believe that SABR has majorly helped them in improving their ability to communicate with their patients. In the view of Al Harbi et al. (2022), it is essential that the culture of the hospital is maintained greatly in order to improve patient safety in the hospital. The reason for this is that the culture of the hospital plays a huge role in ensuring the services of healthcare providers and ultimately facilitating patient safety. Moreover, this research also claimed that the relationship between these two factors is very close, as patient safety is under the heavy influence of the environment of the hospital.

## CONCLUSION AND IMPLICATIONS

***Limitations of the Study***

It has been observed that the researcher has approached primary data collection. Therefore, there are a bunch of limitations present that might be experienced by the researcher during the conduction of the study. following is the list of limitations which has been faced by the researcher in order to carrying out this research work effectively.

- First of all, the researcher has faced an issue regarding accessing the already published article from the online database. Although, the nature of this study mainly depends on the primary data collection. However, the researcher needs to find published articles for the purpose of literature review and discussion where the researcher needs to defend the raised question.
- Secondly, time is the main element for the conduction of an effective research study. therefore, in this study, the researcher has experienced issues related to time to a great extent. The researcher has faced a lot of pressure because of the quantitative survey and the statistical analysis.
- Thirdly, the researcher was limited sometimes due to the irregular and unexpected data analysis of statistics. It has been a huge challenge for the researcher to get a desirable analysis of the study many times.
- Furthermore, another limitation that was faced by the researcher was due to surveys. It is due to the complexity of the survey which makes it difficult for the researcher to organise a report.
- Lastly, the researcher has also experienced an extreme issue related to the budget limit which was limited for this study. Therefore, the researcher was limited in terms of budget.

***Learnings from the Research***

From the literature review of this study, it has been observed that patient harm can continue to be an everyday issue in healthcare systems everywhere. Despite some progress, there are different persistent issues that are still unresolved and engraves of new dangers are now becoming apparent. That is the reason why patients face new difficulties as they get older. Moreover, they have been becoming more complex in terms of needs and frequently have multiple chronic illnesses. Apart from that, new therapies, technologies, and treatment modalities have great potential. However, the researcher has found out that these innovations have come with new risks. Moreover, The Global Alliance for Patient Safety of the World Health Organization has been working in order to spread awareness throughout the world. apart from that, there are different factors that can be affected the safety of the patient positively or negatively. One of the main factors in this scenario is the miscommunication that has been observed by the researcher while conducting this study. Moreover, from

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the analysis of this study, it has been observed that there are determined minor errors in the emergency departments of hospitals which can result in serious issues with diagnosis or treatment. Moreover, it has been analysed that around 17% of PSIs are usually associated with errors in knowledge and skills, while 30% are associated with a lack of knowledge or skills. Apart from that, in this research, there are three variables such as patient safety, healthcare provider, and the environment of the hospital. Among these three variables, healthcare providers and the environment of the hospital are the independent variables, while patient safety is the dependent one.

***Scope of Future Research***

In this last section, the research has provided some suggestions for the future researchers in order to enable a pathway for future researchers to conduct an individual research study from this research study. Therefore, there are the following suggestions that the researcher of this study has made for future researchers in order to carry out an effective research study in future.

- First of all, the future researcher must identify the recent research gap in this study. It could be done by reading and comprehending this study effectively. In addition, the researchers must determine the gaps in their study. Therefore, they have an opportunity to fill the gaps which have not been filled in this study.
- It is also suggested to the future researchers that they are able to gain an offer where they could be able to work on more theoretical and statistical data. Due to this adaptation, it is possible that future researchers would be making this study to the next level of knowledge and ideas which has not been completely explored by the researcher of this study. Apart from that, the future researcher is recommended to widen the participants which makes it possible to grab more information and observation of different people.
- In addition to this, future researchers are also recommended to focus more on the data collection through already published articles and researchers in order to grab the context of this study towards a broader spectrum.

## Recommendations

In this study, the researcher has identified different parameters and factors where the patient safety would be affected in the emergency department. Moreover, for future research studies, the following are the future recommendations that the researcher wants to suggest in order make this context clearer and more visible to the readers.

- It is recommended for the hospitals of the UAE increase the strategies and techniques to manage and mitigate the fatigue of the employees. It could be done with the help of providing support services to them.
- It is also recommended that the hospital should enhance the communication channels by promoting the interdisciplinary collaboration via meetings and training sessions.
- Furthermore, it is recommended that the hospital should enhance the patient safety protocols and regularly check if there is any deficiency that must be handled properly.
- Lastly, it is recommended that in the hospital emergency department, a cultural safety must be fostered through leadership commitment, staff empowerment, and training the employees on the patient safety protocols.

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