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**Perception of Patient Safety at Dental Clinics in  
Al-Azhar University in Gaza Strip**

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# **Perception of Patient Safety at Dental Clinics in Al-Azhar University in the Gaza Strip**

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### **Thesis Approval**

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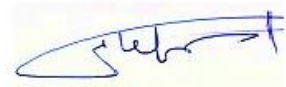
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**Jerusalem- Palestine**

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## **Dedication**

To my supervisor, who was a beacon for me along the way and supported me at every step.

To my parents, who raised me to continue in life whenever I stumbled and planted hope in my heart, and did not deprive me for a moment of their support and standing beside me.

To my dear husband, who was a helper and supporter for me throughout my master's study and shared every moment of fatigue and study with me.

To my children, my brother, sister, and my friends who made it easy for me on the way.

## **Declaration**

I certify that this entire thesis, submitted for the Degree of Master, is the result of my work, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree or qualification to any other university or institution.

Signed..

A handwritten signature in blue ink, appearing to read 'Aya Rafiq', is written over a light blue rectangular background.

Aya Rafiq Abdelrahman Mohsen

Date: 5/8/2023

## **Acknowledgment**

First and foremost, I thank Allah for helping me every moment during my study.

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**Aya Rafiq Abdelrahman Mohsen**

## **Abstract**

### **Background and objectives:**

Patient safety is a discipline that facilitates the avoidance of preventable adverse events associated with health care. Within the field of dentistry, patient safety has been one of the inherent concerns in dental practice. This study aims to assess the perceptions of patient safety at the dental clinic at Al-Azhar University in the Gaza Strip.

### **Methodology:**

This study is a cross-sectional design, the quantitative part of the study was carried out on 211 students. The participants filled out the study survey that was developed based on the Hospital Survey (SOPS) version 2.0, released in 2019. Meanwhile, the qualitative part was performed through 6 focus group discussions with 48 students, and 12 key informative interviews with teacher assistants were conducted. In the focus groups, the researcher asked open-ended questions, and the focus group transcripts provided the main findings.

### **Findings:**

The teamwork domain received the highest mean score (81.3%). While the reporting patient safety event domain was the weakest with a score of 61.2%. Findings revealed the total patient safety score for all domains was 68.45%. The results revealed a low level of event reporting, approximately 70.1% of the participants did report any adverse events in the past 12 months prior to the study. Regarding the results revealed that 89.6% of students believe that patient safety at the dental clinic at Al-Azhar University is acceptable, 52.1% very good, and 37.5% excellent.

The findings of the qualitative study show that most participants need the training to improve their practice in continuous ways and highlighted the need to improve the error reporting system

### **Conclusions and recommendations:**

The safety culture at the dental clinic at Al-Azhar University was perceived moderately by participants, and some safety domains have been identified for future improvement, especially the reporting of adverse events. It is essential also to include patient safety education in the academic program for dentistry students.

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## List of Abbreviations

<b>AHRQ</b>	Agency for Healthcare Research and Quality
<b>ADEE</b>	The Association for Dental Education in Europe
<b>CPI</b>	Consumer Price Index
<b>GDP</b>	Gross domestic product
<b>GS</b>	Gaza Strip
<b>HSC</b>	Health and Safety Commission
<b>IFPMA</b>	International Federation of Pharmaceutical Manufacturers and Associations
<b>oPt</b>	Occupied Palestinian territory
<b>PCBS</b>	Palestinian Central Bureau of Statistic
<b>PHC</b>	Primary Health Care
<b>SOPS</b>	Survey on patient safety
<b>SPSS</b>	Statistical Package of Social Science
<b>UNRWA</b>	United National Relief and Works Agency for Refugees of Palestine in the Near East
<b>WB</b>	West Bank
<b>WHO</b>	World Health Organization

# **Chapter One**

## **Introduction**

### **1.1 Background**

Patient safety is a global problem, in both developed and developing countries. The application of a patient safety culture can minimize the dangers that occur from the non-treatment process or other treatments which will become unexpected events in the hospital (WHO, 2020).

Despite considerable advances in technology and skills in health care over the past decades, patients are still being affected by injuries caused by health care. Moreover, 50% of such adverse events, leading to patient harm, were considered to be preventable (de Vries et al., 2008). The dentistry profession tries to reduce risks and create an open culture of patient safety where practitioners may learn from their own and other people's experience. Safe dental care is essential for supporting good overall health (Pemberton, 2014).

Patient safety has become a top concern and a cornerstone of increasing the quality of treatment provided and decreasing medical error and harm to the patient as patient safety has become essential in any treatment provided as for example in Palestine, as many as 1 in 7 patients admitted to hospitals were found to come to harm with 59.3% of incidents thought to be preventable (Najjar et al., 2013). Patient safety topics have been included in postgraduate and undergraduate health-related professions education around the world (Alper et al., 2009).

Furthermore, learning about patient safety has been shown to be more effective early in working life and at the undergraduate level than at the postgraduate level. In particular, little is known about the multifactorial mechanisms underlying error generation (Alser et al., 2020). And there is a knowledge gap in learning patient safety, so establishing a formal curriculum on patient safety and maintaining this change in healthcare culture is essential (Nabilou et al., 2015)

There are no previous studies that evaluated patient safety in the faculties of oral and dental medicine in Gaza, so this study is conducted in order to evaluate the culture of patient safety in the Faculty of Oral and Dental Medicine at Al-Azhar University. It is anticipated that this

study examined the shortcomings and difficulties in providing safe healthcare in Gaza and found some promising practices and suggestions.

## **1.2 Research problem**

Creating a safe environment in the dental clinics at Al-Azhar University is one of the very important basics and priorities for patients, students and academic staff, Patient safety system is essential for preventing harm and adverse event that might occur during dental care.

As there are no studies in the Gaza Strip that evaluated issues related to patient safety in dental schools before, so there is a gap in the information related to patient safety and preventing medical errors, so this study came to fill this gap and spread the culture of patient safety and to know the weak and strong aspects in the areas of patient safety and because This helps us in graduating dentists who can provide medical services of the highest quality and make patient safety a priority.

## **1.3 Justification**

Patient safety is essential aspect of providing health care services in all health settings. In dental care education, students should be educated and provided with the essential knowledge and skills to do no harm on patients while receiving education. Therefore, it is important to assess the safety culture and measures in the dental clinics of the university in order to identify weakness and strengths and design actions to improve the situation.

In dentistry there is a lack of data on adverse events occurring in the practice of dentistry and most clinical issues that develop in ambulatory settings as scattered as dental care, on the other hand, remain within the engaged dental clinic's environment and are never shared with the rest of the profession. In this regard, that most valuable services can be provided to our profession is the reporting of adverse events.

Anonymous reporting is an extremely ethical practice that allows our colleagues to learn from clinical or surgical errors. Also, to advance knowledge about underlying processes and organizational factors that lead to unsafe care, such as those related to communication and coordination, human factors, and the need to improve the patient safety culture.

## **1.4 Study objectives**

The aim is to assess the patient safety at the dental clinic at Al-Azhar University in Gaza Strip.

## **1.5 The specific objectives**

For quantitative study:

1. To assess the perceptions of dental student's about patient safety culture at the dental clinic at Al-Azhar University.
2. To determine how frequently adverse events are reported at the dental clinic at Al-Azhar University.
3. To identify patient safety strengths and areas for potential improvement in the dental clinic at Al-Azhar University.

For qualitative study:

4. To identify differences in perceptions about patient safety culture in reference to participant's/ students' characteristics.
5. To explore the perceptions of staff/ teacher assistants of patient safety in the dental clinic at Al-Azhar University.
6. To identify patient safety strengths and areas for potential improvement in the dental clinic at Al-Azhar University.

## **1.6 Study context**

The area of historical Palestine is 27,027 km<sup>2</sup>, of which 5,660 km<sup>2</sup> is in the West Bank and 365 km<sup>2</sup> is in the Gaza Strip. There are 16 governorates in Palestine: Jerusalem, which serves as the country's capital; Jenin; Tubas and the northern valleys; Tulkarm; Nablus; Ramallah and Al-Bireh; Jericho and Al-Aghwar; Bethlehem; Hebron; North Gaza, Gaza, and South Gaza. About 3.19 million in the West Bank and 2.17 million in Gaza Strip (PCBS, 2022).

The population of Palestine is young 38% of the total population were under 15 years, 36% in the West Bank and 41% in Gaza Strip. And according to Persons aged 65 and above constituted 3% of the total population, 4% in the West Bank and 3% in Gaza Strip and children in Palestine constitute nearly half of the population, which means that investing in



this segment of society is important to guarantee their rights and provide them with opportunities to live in dignity and safety (PCBS, 2022).

After the 1948 Palestinian catastrophe (Nakba), more than 75 percent of Palestine was under occupation. Israel was thus founded on the area of Palestine that had been invaded in 1948, or 78% of what had previously been Palestine. Israeli rule over the Palestinians who remained in their country was total and direct. They were treated as Israeli citizens and were subject to a number of laws and regulations aimed at eradicating Palestinian culture and identity. In terms of statistics, all information on Palestinians residing in this region of historic Palestine that was occupied in 1948 was regarded as being a part of the Israeli statistical system. As a result, data on the Palestinian population is included in all issues and publications of Israeli statistics.

The number of governmental and non-governmental hospitals in Palestine reached 89 hospitals in 2021, 54 in the West Bank and 35 in the Gaza Strip. It has a capacity of 7,296 beds, distributed among 4,270 beds in the West Bank, and 3,026 beds in Gaza Strip (PCBS, 2023).

For Palestinians living in the Gaza Strip, the conditions of life that affect health are badly influenced by severe limits on people's freedom of movement and restrictions on the entry and exit of supplies. In addition, rising unemployment, food insecurity, and poverty have been accompanied by challenges to the proper provision of clean water and sanitation, which are crucial for health protection. Obstacles to receiving medical care include restrictions on movement that affect patients, companions, and medical personnel; restrictions and disparities that influence medical supplies and equipment; and protection deficiencies that have allowed 645 attacks on hospitals in the Gaza Strip since 2018 to occur (WHO,2022).

Most of the more than 1.2 million Palestine refugees in Gaza are served by UNRWA's 22 centers for health care. In addition to individualized maternal health and family planning services, all the health centers offer clinic and laboratory services. Six centers offer radiology services, while 21 offer dentistry care (*Health in the Gaza Strip* / UNRWA, n.d.).

In the Gaza Strip, there are two universities that teach dentistry, Al-Azhar University, starting in 2007, and the University of Palestine, in 2012, teaching dentistry began.

Faculty of oral and dental medicine provide the service all age groups, from children to the elderly, as there is a pedodontics, endodontic, oral surgery, oral and maxillofacial surgery, prosthodontic, orthodontic, operative, oral radiology, diagnosis, oral medicine, periodontics clinics.

Where dentistry has become one of the fields of study that are chosen by many students, and the numbers registered in both universities have increased, as it is a job based on serving the patient and also requires high levels of manual dexterity and analytical skills.

There are many circumstances and bitter realities that people live through, including siege, deprivation, denial of entry of medical materials, and the scourge of wars that our people suffer from. All of this, in turn, affects the educational environment in universities.

Therefore, the patient safety in these educational institutions is a major priority, improving all aspects of weakness, and try to overcome the difficult conditions faced by students, the university, and patients, in order to provide the top probable service.

## **1.7 Definitions of terms**

**Patient safety:** Is to prevent and minimize risks, mistakes, and harm to patients during the delivery of healthcare. Continuous improvement based on learning from mistakes and unfavorable circumstances is a tenet of the discipline (WHO, 2019).

**Organizational culture:** Is a set of values, expectations, formal and informal practices, and behaviors that define the unique corporate environment. Culture is profoundly imbued in the texture of hierarchical life; It determines how the business is run, how employees are treated, how leaders are evaluated, how customers are served, and how productivity and performance are managed (Brooks, 2016).

**Safety culture:** is the aspects of organizational culture that relate to health and safety management. It is defined as a product of individual and group values, attitudes, perceptions, competencies and patterns of behavior that determine the commitment to, and the style and proficiency of an organization's health and safety management (Bygrave et al., 2015).

**Patient safety culture:** Is focused on the aspects of organizational culture that relate to patient safety. It is characterized as an example of an individual and hierarchical way of behaving, given shared convictions and values that ceaselessly look to limit patient damage,

which might result from the course of care conveyance (Gabrani et al., 2016).

**An event:** Is defined as any error, mistake, accident, or deviation, regardless of whether it harms a patient or not (AHRQ, 2012).

**An adverse event:** an injury that was caused by medical management rather than the underlying disease and that prolonged the hospitalization, produced a disability at the time of discharge, or both (Schwendimann et al., 2018).

**Error:** A failure to carry out a planned activity as intended (an error of execution) or the deployment of a flawed plan to accomplish a goal (a planning error) (Reason, 2000).

**Near miss:** An error that could potentially result in a negative outcome (patient injury) but does not do so due to chance or because it is caught (WHO, 2005).

**Handoff:** A hand-off is an exchange and acknowledgment of patient consideration obligation accomplished through successful correspondence. To ensure patient safety and continuity of care, Blouin (2011) states that this is accomplished by passing patient-specific information from one caregiver to another or from one care team to another. It's a real-time process handed off to your team.

## **Chapter Two**

### **Literature Review and Conceptual Framework**

#### **2.1 Literature Review**

##### **2.1.1 History and evolution of patient safety:**

The idea of safety culture was developed outside of the healthcare industry, in fields like aviation and the nuclear industry, in studies of high reliability companies that continuously avoid adverse events despite engaging in activities that are inherently dangerous and complicated.

The healthcare sector is viewed as complex and extremely high-risk because there is a substantial danger of morbidity and mortality (Colla et al., 2005). Consequently, safety culture serves as a factor in the healthcare industry that lowers and avoids potential pharmaceutical errors, thereby improving the overall quality of healthcare services delivered to the service users and developing a culture of patient safety (Ghobashi et al., 2014).

Patient safety is therefore, the provision of treatment to patients in order to prevent any likely harm by minimizing errors and hazards and fostering a culture of safety that includes healthcare professionals, organizations, and patients. (Mitchell 2008). A patient safety culture must exist in to provide healthcare, and the complexity of healthcare systems necessitates ongoing research and culture enhancement. (Øvretveit, 2009; Ghobashi et al., 2014).

The Institute of Medicine's (IOM) report "To Err is Human" was not released until the late 1990s, at which point patient safety began to get widespread attention. According to this study, between 44,000 and 98,000 individuals die in American hospitals each year as a result of avoidable mistakes (Sammer et al., 2010).

Similar figures have been released by other studies (Aranaz-Andrés et al., 2008). The public shock generated by the release of these numbers has pushed patient safety issues onto the agendas of healthcare professionals, administrators and politicians. As a result, patient safety became a major concern for everyone involved in health care (Singer et al., 2008). As the pressure to improve patient safety gains momentum daily, such concerns are likely to support efforts to promote a climate of safety.

In 2004, the Agency for Healthcare Research and Quality (AHRQ) released the Surveys on Patient Safety Culture™ (SOPS®) Hospital Survey for providers and other staff to assess patient safety culture in their hospitals. The survey has been implemented by hundreds of hospitals nationwide and internationally since then. The SOPS Hospital Survey 2.0, a new version, was released by AHRQ in 2019. The original survey—Version 1.0—is still available; however, the use of Version 2.0 is encouraged (Hospital Survey on Patient Safety Culture, 2023).

One of the guiding principles of health care is patient safety. Yet, numerous medical procedures and risks connected to health care are becoming important obstacles for patient safety globally and greatly increase the burden of injury from subpar treatment. According to the research that is currently available, hospitalizations cause 3.4 million deaths and 134 million adverse events yearly in low- and middle-income nations (IFPMA, 2021). Every year, 2.6 million people worldwide die as a result of around 134 million unfavorable occurrences (Aiken et al., 2013).

According to estimates, around 1 in 10 people receiving hospital care in high-income countries suffer injury (WHO, 2019). Even though the concerns and priorities may vary, this issue impacts both high-income countries and low- and middle-income countries. The most significant side effects relate to drug administration, healthcare-associated infections, surgery, injection safety, blood transfusion, sepsis, venous thromboembolism, and mistakes in diagnosis and radiation (Maki & Zervos, 2021).

Although there has been considerable improvement since the Institute of Medicine (IOM) study "To err is human" was published in 1999, patient injury continues to be a daily issue in the healthcare industry. In fact, as the population ages, new dangers, remedies, and technologies are appearing, and these must be dealt with in addition to old, persistent issues. Adopting an international common approach that builds networks, distributes knowledge, tools, programs, and best practices, as well as develops and tracks indicators concentrating on the unique goals of each country and region, is crucial in this environment (Wall, 2000)

### **2.1.2 Dental Patient safety worldwide:**

Within the field of dentistry, patient safety has been one of the inherent concerns in dental practice, but here few organized programs specifically for promoting patient safety, dental

care is fundamentally private, and there may be a fear that reporting adverse events might have some repercussions on the commercial profit of clinics because the patients are ambulatory, making it difficult to become aware of and follow up on any adverse events. Additionally, there is a great dispersion of dental care, making it difficult to collect data (Yamalík & Pérez, 2012).

The inspirations are different for experts and the potential for undertaking instructive missions that arrive at all dental specialists is restricted because of their boundless scattering. Within the wider scope of patient safety education, the literature suggests that there are perceived weaknesses in the patient safety culture of dental schools (Abutayyem et al., 2021).

Thus, Association for Dental Education in Europe (ADEE), in 2017 has developed a curriculum emphasizing the role of patient safety and patient center care. Focus on groups for dental undergraduates at the outset of their clinical practice was considered as a way to not only get insight into the efficacy of existing teaching but also to improve the quality of patient safety instruction for tomorrow's doctors (Field et al., 2017).

The literature shows that there is a positive attitude of undergraduates toward patient safety and a sound understanding of the concept after teaching them (Palmer et al., 2019).

This is encouraging, given that these students are the dentistry profession's future leaders. The findings of the Malaysian study suggest that the attitude of dentists toward ethical and safe practice is more important than guidelines and regulations in promoting patient safety (Panagioti et al., 2018). This is consistent with reports that dentists frequently do not adhere to infection control guidelines (Al-Rabeah & Mohamed, 2002).

The Safe practice would be made possible by providing education and training in ethical and professional patient safety behaviors. The quality of education that health professions students get has been shown to directly impact safe, patient-centered care (Kiersma et al., 2011).

According to closed claims data obtained from the Oral and Maxillofacial Surgeons National Insurance Company, the leading causes of injury to patients include wrong-site tooth extraction (12%), avoidable nerve injury (9%), poor results from treatment (8%), infection

(7%), improper procedure (7%), and the failure to diagnose (2%) (Oral and Maxillofacial Surgeons National Insurance Company, 2011). Wrong-site tooth extractions and avoidable nerve injury are indefensible, preventable medical errors (Holmes & Udey, 2008).

As educators of future dentists, dental schools ought to begin reviewing their patient safety programs in their teaching clinics and encouraging additional research into patient safety best practices.

### **2.1.3 Patient safety in Palestine:**

In Palestine, the health sector development takes place in a unique political and socio-economic context. Public health services have evolved considerably since the creation of the Palestinian Authority and the transfer of public services to the Palestinians in 1994. The international community contributes significantly to building the health sector's capacity, but the peace process in deadlock and fragile political situations and political division remain the main challenges (Hamdan et al., 2003).

There has been growing attention to improving the quality and safety of services provided in hospitals. The issue became one of the key strategic areas included in the last national health strategy (Ministry of Health, 2010.).

In dentistry, there is a critical need for strict adherence and compliance to infection control protocol to prevent the transmission of infectious diseases in any health care setting. For example, the total compliances regarding all infection control domains were (70.0%). Whereas the participants gave the highest positive response for personnel protective equipment; gloving (96.10%), face masking (77.70%), protective clothing (76.30%), hand washing (76.10%), vaccination against HBV (74.50%), and eye protection (74.30%). They gave the lowest responses to the instruments' related controls; Except for surface decontamination, which received responses of (78.00%), instruments sterilization was (59.40%), and aerosol control, accident management, and monitoring autoclave were (55.1%), 55.30%, and 47.20%), respectively (Menawi et al., 2021).

### **2.1.4 How to create a culture of safety:**

Despite notions that safety culture cannot easily be created or engineered. The creation or enhancement of a safety culture is the task of all organization employees dependent on the

improvement of the various organizational characteristics which impact the safety management practices (Naji et al., 2021).

Hudson's (2001) evolution of safety culture accords with the work. Where he notes that there are 3 main cultural developments, the first of which is ensuring that training programs, work conditions, procedures and processes comply with regulations (passive compliance). The second is involving workers in the task of regulatory compliance and encouraging them to take personal responsibility (active compliance) and the third is teaching individuals to detect errors and benefit from the recommendations to act in safely behavior.

The field of health services places a high priority on patient safety, and as a result, healthcare professionals are fully accountable for the security and safety of their patients. The level of patient safety will be positively impacted by the effectiveness of the safety system implemented by medical personnel within the confines of the hospital. This can undoubtedly help hospitals, particularly medical staff, by reducing patient demands in the event of medical blunders (Lee et al., 2011).

The Institute for Healthcare Improvement recommends 10 approaches to building a culture of patient safety in the health service, namely conducting patient safety leadership, walking rounds, creating reporting systems, forming patient safety teams, engaging patients in safety initiatives, delivering safety reports on shift shifts, appointing safety champions for each unit, understanding possible risks, conducting safety briefings and forming a team that responses to unexpected events (Tan et al., 2019).

### **2.1.5 Safety dimensions Teamwork:**

The fact that people today place more value on their health, that they have a greater demand for high-quality healthcare, and that they are pickier about which institutions they choose when they require healthcare services has led to an increase in competition. The continual growth in the number of institutions offering healthcare services and the necessity for such institutions to survive are two factors contributing to this competition (Frankel et al., 2006).

The team is a significant idea in the healthcare institutions that operate in this competitive setting. The term "team" describes compact groups of two or more individuals working cooperatively to accomplish a common, worthwhile objective (Goltz et al., 2008).



Healthcare teams are groups of two or more clinicians (physicians, nurses, dietitians, etc.) who collaborate, share resources, and assure coordination and communication in order to provide patients with comprehensive, high-quality healthcare services that consider their needs (Henkin et al., 2016).

A team's effectiveness is measured by how well it performs the tasks it has been given while maintaining the required levels of quality and quantity. An effective team has several features. Everyone participating in the conversations, everyone understanding and adopting the team's roles, everyone listening to one another, a natural and relaxed environment, Making decisions by consensus, the ability to make decisions without adhering to the group attitude (the absence of the requirement that all members agree with the decision made by the group), constructive criticism that focuses on problem-solving, the absence of leader domination, and the team's understanding of self-supervision (Yaman et al., 2016).

- **Staffing:**

As a foundation for far-reaching distal outcomes like decreased mortalities, hospital-acquired infections, complications, and readmissions, employee perceptions of the value of patient safety in their workplaces are a significant component of safety culture (Fan et al., 2016).

Appropriate staffing levels may lessen the strain brought on by overexertion and maintain employee motivation, which further allows for improved teamwork and handoffs (West et al., 2014). Managers should devote time and money to staff recruitment and retention as well as training personnel for improved care coordination to create a safety culture. Quality and safety improvement involves a focus on both individuals and systems ("Keeping Patients Safe: Transforming the Work Environment of Nurses," 2005).

Modern healthcare facilities must both provide state-of-the-art health care and retain an efficient, healthy workforce in order to provide patients with the high-quality care they need. Therefore, guaranteeing both patient safety and the well-being of workers should be top priorities for medical facilities. Healthcare organizations throughout the world have made significant investments in a variety of treatments over the past ten years with the goal of enhancing patient safety, while initiatives to safeguard worker well-being have drawn relatively less organizational funding. Although the sparse research appears to indicate a

negative correlation between patient safety culture and staff burnout, the potential relationship between safety culture and employee well-being remains gravely understudied (Mossburg & Himmelfarb, 2021b). A key personal factor to look at in safety culture research is worker well-being, which is well-represented by work-life balance. (Sexton et al., 2017).

Therefore, in order to keep patients safe in dental offices and deliver the best possible medical care, it is important to look after the staff, train them, and not put too much pressure on them while they are at work. By doing this, the interactions with patients and students are respectful and professional.

- **Management safety commitment:**

The most significant aspect of the safety climate is management's commitment to safety (Luo, 2020). Management safety commitment has been identified as a critical component in affecting an organizational safety environment in industries (McGonagle et al., 2016).

Written policy, effective communication, and exemplary practice are indications of management's commitment to safety (Gilkey et al., 2002). It was thought to influence safety culture through two mechanisms: the first is the direct effect, in which the manager acts as a role model to influence workers' safety behaviors; the second is the indirect effect, in which the manager consciously establishes and reinforces the norms and attitudes relating to safety practices, thereby fostering a safe environment (Saleem & Malik, 2022).

A well-written organizational policy statement with safety goals and objectives, clear written safety rules and procedures, effective management communication about safety goals, objectives, policies, initiatives, strategies, and concerns, mandated exemplary safety practices, regular reviews of safety practices, and an adequate allocation of safety resources are all indications of management commitment to safety. For a safety program to be successful and to foster a culture of safety, each of these elements must exist (Lerman et al., 2012).

- **Modelling effect:**

Strong modeling effects are produced by management's excellent safety practices. It has a direct impact on the behaviors and practices of dentistry students. It is encouraged for employees to act in a manner similar to that of their bosses or cadre. If their manager actually

cared about patient safety, dental students would simply emulate their manager's safety behaviors (De Stefano, 2019).

- **Effect of safety policy:**

Managers that care about patient safety would work to create and enforce clear, documented safety policies. More significantly, the organization is ruled by the explicit written policy, which is distributed to and followed by all levels of management. As a result, everyone in the company is aware of the safety policy and is aware of the potential consequences of breaking it. Hence, there is no opportunity for an unwritten norm to take effect and create a dangerous practice (Jonathan & Mbogo, 2016).

- **Effect of safety training:**

Safety training would be a vital method for managers who are dedicated to fostering a culture of safety. Training will assist students develop positive attitudes regarding practicing patient safety, in addition to improving their knowledge and skills concerning safety procedures (Weaver et al., 2013).

- **Effect of tangible support:**

The management's practical assistance, such as safety equipment offered, may help increase the favorable safety environment. There they discovered a direct link between the accessibility of protective personal equipment and the use of infection control best practices by healthcare staff (Green-McKenzie et al., 2021).

- **Team manager and supervisor:**

Healthcare managers are required by law and morality to ensure that patients receive high-quality treatment and to work to make it even better. These managers are in a great position to impose organizational climates, policies, systems, and procedures. Several have therefore claimed that it is obvious that healthcare managers play a significant and obvious role in the quality of care and patient safety, and that this is one of their top concerns (Usher et al., 2017).

As part of their clinical job and professional obligation to ensure that patients receive safe and high-quality care, all members of the multi-professional team—doctors, senior nurses, and allied health professionals—participate in the clinical supervision of less experienced

doctors. To propel patient security, medication needs viable administration. Leaders must constantly work to improve procedures, led by example, and manage resources. Successful leaders promote safety efforts and develop systems that handle issues raised by patients and front-line healthcare professionals (Weaver et al., 2013)

- **Communication:**

Communication between healthcare professionals is crucial. The vast majority of medical malpractice cases are the result of either a breakdown in communication between healthcare professionals or a failure to record such communication (Tiwary et al., 2019).

Communication is the cornerstone of healthcare. Compelling correspondence isn't simply basic to addressing patient requirements and giving protected, top caliber, and patient-focused care, it is important to how oversee medical services conveyance. To work with significant improvement, the way to medical services change should be cleared with great correspondence in an upward direction starting from the top and the base up, and evenly across the continuum of care conveyance (Akinci & Patel, 2014).

A crucial competency skill for providing patient-centered, value-based care is effective communication. Improved communication has been associated in numerous studies with better patient outcomes, safer workplaces, fewer adverse events, fewer transfer delays, and shorter lengths of stay (Driskell et al., 2018). Also, there are connections between caregiver communication styles and favorable patient outcomes, such as patient retention, comprehension, and therapy compliance (King & Hoppe, 2013).

It has additionally been shown that patients' views of their considerable experience are impacted by the amount and nature of guardians' correspondence with patients and among themselves. For instance, when there is effective communication between members of the care team and with patients and their families, patients are more likely to recommend the organization and give their overall care a higher rating (Chandra et al., 2018).

Moreover, communication is a crucial component of employee engagement. It has been demonstrated that effective communication among healthcare team members affects the caliber of working relationships and job satisfaction (King & Hoppe, 2013).

These findings collectively imply that when healthcare practitioners communicate effectively providing important information in a timely or understandable manner, clearly outlining orders or instructions, and thoughtfully and fully responding to inquiries they provide safer and higher-quality treatment. According to research, care is also more cost-effective and cost-efficient, two crucial factors in the value-based healthcare model (Vermeir et al., 2015).

At release, poor communication between members of the care team and with patients, families, and post-acute care facilities can lead to misunderstandings about medication and follow-up treatment, sometimes resulting in avoidable readmissions and malpractice lawsuits that could have been avoided. Researchers found that communication between caregivers and patients has the biggest influence on lowering readmissions in one study using six years' worth of data from around 3,000 acute care hospitals. The findings specifically show that if a hospital prioritized patient communication in addition to adhering to research-based standards of care, it would, on average, cut its readmission rate by 5% (Senot et al., 2016).

Research connecting these crucial performance areas to the patient-centeredness of care is consistent with the finding that communication has an impact on the safety, quality, and experience of care as well as caregiver engagement. It also agrees with recent cross-domain analysis findings, which show how closely related these factors are to both financial outcomes and one another (Pun et al., 2018).

Many evidence-based recommended practices can improve outcomes by enhancing communication abilities. Using a standardized communication tool, such as the Situation, Background, Assessment, and Recommendation (SBAR) technique, to facilitate prompt and appropriate communication about patient status, implementing daily, multidisciplinary patient-centered rounds using a daily goals sheet, holding care team huddles throughout each shift, and investing in communication skills training for all staff are a few examples. Effective communication skills must be learned, practiced, and monitored in order to improve highlighting the leadership's support for communication initiatives (Davis et al., 2023).

By demonstrating acceptable behavior, establishing expectations, and putting money into support mechanisms built into the organization's framework, leaders can foster an atmosphere of open communication. Promoting patient-centered communication as a need for delivering safe, high-quality treatment is the responsibility of leaders and managers at all levels of the organization (Rosen et al., 2018).

An individual's and an organization's performance on clinical quality, patient experience, and financial outcomes can all be significantly impacted by one's capacity to explain, listen, and empathize. For this reason, health systems should make investments in monitoring and enhancing these skills in the current workforce, and the sector as a whole should support projects that concentrate on fostering these skills in the upcoming generation of doctors, nurses, and healthcare professionals (Moudatsou et al., 2020).

**- Handoff and transition:**

Patients would remain in one location and receive care from a single team of doctors and nurses in an ideal world. But who would desire such a world, now a Patients become ill, then recover. Then they go home. Doctors and nurses work in shifts. Residents complete their programs and start working. Handoffs and transitions, or the process of transferring primary authority and responsibility for clinical care from one departing caregiver to another, are therefore common in the medical profession (Andermann, 2016).

The Joint Commission defines handoffs as a contemporaneous, interactive process of passing patient-specific information from one caregiver to another in order to guarantee patient safety and continuity of care. As a result, handoffs are recognized as an essential therapeutic activity that takes place at every level of a hospital, from the individual level (such as between nurses or doctors) to the organizational level (for example, across hospitals for a patient transfer). A recent study showed that in a typical teaching hospital, there are over 1.6 million handoffs every year (Blazin et al., 2020).

When handoffs are ineffective, information gradually degrades, a process known as funneling that is characterized by omissions and errors in the information conveyed across clinicians (Arora et al., 2005).

As a result, they are acknowledged as having a significant impact on sentinel events and medical errors. The Joint Commission has ordered all hospitals in the US to standardize communication activity between and among physicians and nurses during transitions by establishing safe handoff rules and tools in order to reduce some of the errors (V. M. Arora & Johnson, 2006). To assist with the handoff standardization efforts, a range of communication techniques and tools, including mnemonics, checklists, and templates, have been suggested.

#### **- Reporting errors**

Error reporting is essential for error prevention. The Institute of Medicine's (IOM) publication *To Err Is Human: Building a Safer Health System* drew attention to medical errors since it claimed that preventable adverse hospital events were the main cause of death in the US. This study highlighted research from the Harvard Medical Practice Study, which indicated that more than 90% of errors that result in adverse events were deemed preventable and that more than 70% of errors were regarded to be due to neglect (Medicine & America, 2000).

The IOM report also emphasized the importance of reporting errors, using systems to “hold providers accountable for performance,” and “provide information that leads to improved safety.” Conceptually these purposes are not incompatible, but in reality, they can prove difficult to satisfy simultaneously (Mugendi, 2018).

However, just as important as reporting errors that actually cause patients harm is reporting potentially harmful errors that were caught before harm was done, errors that did not cause harm, and near-miss errors. Patient safety efforts focus on the systemic deficiencies that exacerbate errors in the complex world of healthcare. These improvement efforts could be unsuccessful because many errors are never willingly disclosed or caught by other systems (Wolf, 2008).

Errors can affect patients or not, and they represent a variety of systemic issues, including a culture that is not focused on safety and the existence of unpleasant working conditions for nurses. It is necessary to adjust the underlying, more prevalent, and less dangerous systems that are more frequently linked to near misses in order to successfully prevent future errors that could damage patients (Ahsani-Estahbanati et al., 2022).

Reports of errors that hurt patients, errors that happen but do not hurt patients, and errors that could have hurt patients but were prevented in some way before they reached them can all be used to identify systemic issues. Reporting near misses, which can happen 300 times more frequently than adverse events and indicate when harm to the patient was prevented, can offer priceless knowledge for proactively lowering errors (Sheikhtaheri, 2014).

Analysis of reported errors has uncovered several "hidden dangers" (near misses, risky circumstances, and deviations or modifications), which point to system vulnerabilities rather than deliberate actions by clinicians that might ultimately damage patients (Dai et al., 2023).

The fact that an error was and still is one does not change just because it did not create a major or potentially serious occurrence. Since sharing information about mistakes and near-misses has helped many industries increase safety (Wolf, 2008).

Enabling reporting has advantages for both the patients that health care organizations serve. By reporting, a process is established that enables important stakeholders to be informed of mistakes and near-misses. Healthcare organizations can review reasons, adjust procedures, and create new ones after data have been collected in order to lower the likelihood of errors. In order to facilitate the adoption of patient safety systems and to enhance internal (e.g., inter institutional) reporting and disclosure to patients and families, organizations have used techniques such as staff education, eliciting staff advice, and budget appropriations (Lu et al., 2022).

The effects of mistakes that actually hurt patients can offer crucial information to guide the adjustment or development of policies and procedures for preventing such mistakes from hurting patients in the future. According to the Joint Commission, once errors are recognized and the underlying issues or "root causes" are located, it is possible to lessen similar errors and improve patient safety. When mistakes and near-misses are reported, the data can assist businesses in better understanding what occurred, identifying the combination of circumstances that led to the mistake or near-miss, figuring out how frequently it happens, and predicting if it will happen again. The organization's and physicians' responsibility to inform/disclose patients about the error is frustrated by underreporting and failure to record errors and near misses, which hinders attempts to prevent subsequent errors (Gallagher et al., 2003).



Patients want to know that quality improvement activities backed by shared learning will help to prevent similar future errors as they become more aware of real and potential mistakes (Dash et al., 2019).

Patients and the general public support error reporting, especially required reporting and want to know that doctors and organizations accept errors that they are reported as soon as they are discovered, and that they are acknowledged to leaders, managers, and peers (Aljabari & Kadhim, 2021).

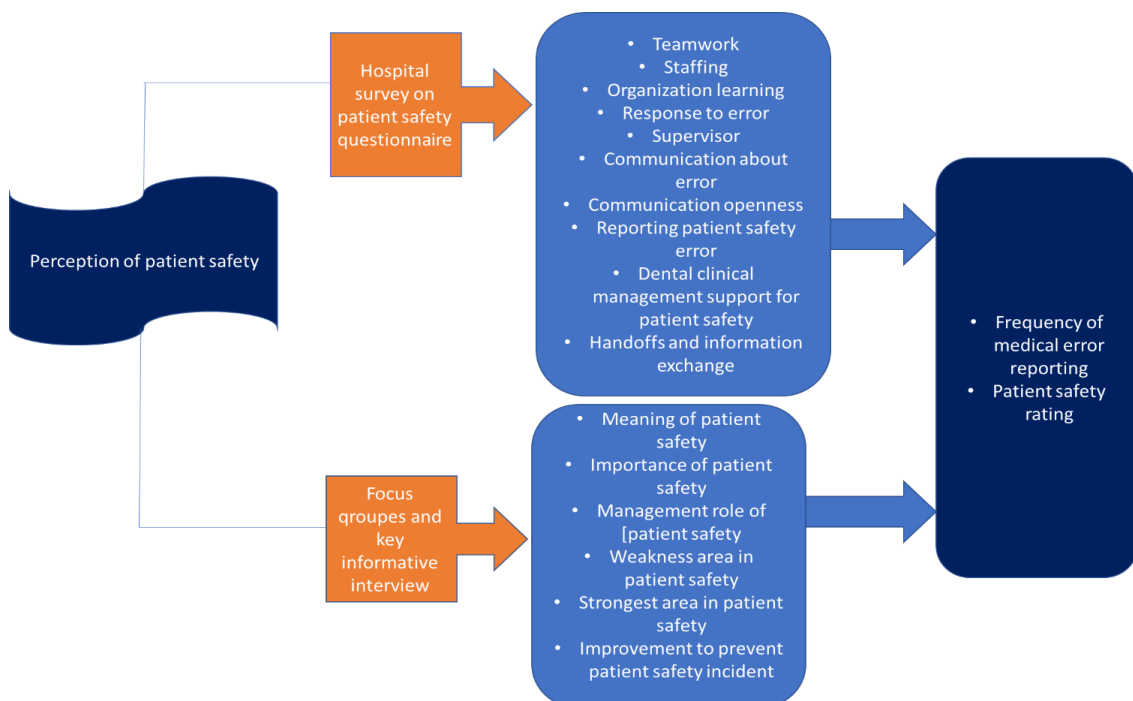
## 2.2 Conceptual Framework

Patient safety may be seen as a comparatively 'new' discipline even though it is fundamental to the work of the health care professions and has only recently been transformed into a distinct body of knowledge.

Its major goals are to prevent avoidable adverse events (accidents, errors, and problems) related to health care from happening and to lessen the effects of unavoidable bad events. Despite these straightforward definitions, patient safety is diverse, extremely complicated, and comprises a number of many components.

There are economic, physical, social, cultural, and organizational dimensions of a patient safety atmosphere, therefore it cannot be summarily characterized as the provision of safe healthcare or the protection of patients from injury by healthcare practitioners.

Understanding the overall context of patient safety, actively taking part in efforts to adopt patient safety measures in everyday practice, and creating a patient safety culture are critical for all healthcare professionals and organizations.



**Figure (2.1): Conceptual framework of patient safety culture perception in dental clinic**

### **2.2.1 Patient safety culture domains in dental clinic:**

- **Dental clinic level domains:**

#### **Handoff and information exchange:**

Along the healthcare value chain, clinical handoffs, sometimes referred to as sign-outs, shift reports, or handovers, take place frequently. 'Transferring professional duty and accountability for part or all aspects of care for a patient, or groups of patients, to another individual or professional organization on a temporary or permanent basis' is what it entails (Sh et al., 2016).

In the College of Oral and Dental Medicine, either the patient's data remains in the same department and another doctor completes the treatment, for example in the Department of Oral and Maxillofacial Surgery, the student extracts teeth and another student complete the tooth extraction treatment.

And the patient data file can be transferred to another department, such as the prosthetics department, so that another doctor can perform prostheses for the patient after the extraction.

#### **Reporting error:**

Recognize our vulnerability and create procedures and protocols to prevent errors by adopting a more positive, constructive mindset that is centered on analyzing why errors occur. Errors and human behavior are intricately intertwined. By enhancing the design of technology, processes, and work systems, human factors in healthcare aims to ensure patient safety by encouraging efficiency, safety, and effectiveness. Fundamentally, this embraces uniformity and entails analyzing and designing errors out (Sameera et al., 2021).

#### **Dental clinic management support for patient safety**

The quality of care and patients' attitudes regarding treatment are positively impacted by improving patient safety cultures in healthcare organizations. Although dental clinic managers clearly play important roles in developing a culture of patient safety.

Healthcare managers are required by law and morality to ensure that patients receive high-quality treatment and to work to make it even better. These managers are in a great position to impose organizational climates, policies, systems, and procedures. As a result, many have argued that healthcare managers have a crucial and obvious role in the quality of care and patient safety, and that this is one of their top objectives (Parand et al., 2014b).

### **Teamwork:**

A dental team that functions effectively and harmoniously provides patients with exceptional care while making the experience enjoyable for everyone. A good dental professional will be cognizant of their own positions within the team as well as their own, and will be completely aware of their own particular responsibilities. Understanding the range of tasks and duties inside the practice and becoming familiar with who does what and when will help you put a solid team together. Understanding skill sets, as well as which people get along best with one another, all contribute to a more efficient practice and better patient care (Rosen et al., 2018).

### **- Organizational Learning:**

Any place, whether it is an institution, a company, an educational hospital, or a university, seeks to facilitate the education of each member of it continuously and tries to take them to the top so that they remain constantly competitive among those around them and similar companies and hospitals. This term means every work to obtain a learning and educational environment. With the progress that witnessing today in acquiring and benefiting from information and the transformation of the place for the better (Tan & Olaore, 2021).

In the College of Oral and Dental Medicine, efforts must be made to ensure that the academic staff is enriched with the latest developments in science and to give them advanced training courses in dentistry, science and equipment in order to benefit the students and be satisfied with the quality of the services provided to the patient and maintain the patient's safety

- **Response to error:**

Building a culture of safety for the patient and staff requiring from both students and staff should be urged to write error reports in order to learn and benefit from these errors and strive to develop the college (Ulmer et al., 2009).

the medical errors are one of the important causes of death, but in dentistry, the risk is less and does not reach death except in rare cases, but this does not mean that do not attach importance to writing reports of medical errors, as in a learning and educational environment at the university, students must be taught and academic staff urged them to write reports so that the benefit would be generalized to other the students and other departments, and the patient's complaints and complications that might happen to him would not be frequent, because there is continually evaluation to medical error and reports and make improvement and get rid of the weakness (Rodziewicz, 2023).

- **Communication:**

The efficiency of diagnoses, the integrity of clinical decision-making, the success of clinical interventions, and the pleasure of patients and clinicians are all improved by effective communication skills, which are accurate listening or observation and focused verbal or nonverbal response (Berkhof et al., 2011).

Additionally, it lessens the anxiety and perception of pain in the patient. Contrarily, ineffective communication is the most frequent source of dissatisfaction with care, the spread of mistrust, including malpractice and the end of the partnership (Street et al., 2020).

Being in a teaching hospital at the university, the communicating is important with everyone in the college, whether a supervisor, director, colleague or patient, because effective and successful communication is one of the most important foundations for the success of the college and the rise of its level and for providing successful treatment without complications for patients coming to the hospital (Kourkouta & Papathanasiou, 2014).

- **Supervisor support**

The supervisor is responsible for the movements of all employees and students in the clinics, and bears full responsibility for the students' dealings with patients and their actions with them. Supervisor responsibility is to train the students and the staff and tries to strengthen the skills that the supervisor and the staff see as lacking so that services are provided at the highest level and maintain the safety of the patient and also correct the environment in which the employees work and try to remove any danger from them and listen to them in case they have complaints and try to remove problems and improve the situation and this is all in order to create an environment that supports patient and staff safety (*How Can Occupational Safety and Health Be Managed? (Labour Administration and Inspection)*, 2023).

- **Staffing and workplace**

It means the employment of workers and teacher assistants in clinics to train students, as well as academic and nursing staff in accordance with providing the basics of patient safety and its objectives, and continually evaluating them to enhance compatibility and access to safety goals (Carayon et al., 2014b).

## **Outcome Domains**

- **Reporting events**

It means writing reports of medical errors for the patient that may occur while receiving treatment in the college, and also writing errors that reach the patient without being harmed, and to find an integrated system to follow up in order to try to reduce medical errors and maintain patient safety, and of course communicate with the university administration at all levels to support the system of writing error reports medical (Bell et al., 2020).

- **Perception of patient safety culture**

It refers to how students who treated patients in clinics at the fourth and fifth levels perceive the safety of services provided to patients, as well as the opinion of teaching assistants and heads of departments about the compatibility of services in the university and the compatibility of clinics and services with patient safety protocols. it differs from student to student and from one teaching assistant to another, due to the difference in the clinic in which

the teaching assistant works. Patient safety protocols in the surgery clinic differ from the conservative treatment clinic, as well as the environment of each worker differs from the other (Haleem et al., 2021).

## **Chapter Three**

### **Methodology**

This chapter presents the study methodology. takes about the study design, target population, study setting, study population, sample size, and study period. It also explains the used instrument, the administrative and ethical procedures, the pilot study, data collection, data entry and analysis, and the limitations of the study.

#### **3.1 Study design**

A cross-sectional design was used to assess Patient safety in Dental Clinic-Al-Azhar University. Methodological triangulation was used in this study to combine quantitative (survey for students) and qualitative paradigms (in-depth interviews with 48 students and key informative interviews with 12 teacher assistants) to give an in-depth understanding of patient safety.

#### **3.2 Study setting:**

The study was conducted at Al-Azhar University in the Faculty of Dentistry.

#### **- Study population:**

This study includes two populations the first one is all students who entered clinics and deal with patients, they are the fourth level, their number is 126, and the fifth level is 85, and thus the total sample becomes 211 and the second population is 12 key informative interviews with 12 teaching assistant and 6 focus group with 48 students in the dental clinic of Al-Azhar University to make in-depth focus group discussion.

#### **3.3 Inclusion criteria:**

Participants included undergraduate students of the faculty of dentistry at Al-Azhar University the fourth and fifth level who starts training from the fourth level in dental clinics on patients and were supervised by faculty members. This ensures that study participants have experienced real working environments and therefore were able to report their perceptions of patient safety in the University clinics. As for the qualitative group of teaching assistants, it included those who supervise students in dental clinics and deal with patients.



### **3.4 Sample size calculation:**

For the first part of the research, the quantitative part was a census sample that included all the students in the fourth and fifth levels, estimated to be 211 students. The other part of the research was the qualitative part, 6 focus groups, each group having 8 participants, to discuss the topic of patient safety in more depth to know the level of cognitive awareness of students about patient safety. And 12 key informative interviews with teacher assistants to explore patient safety in the dental clinic at Al-Azhar University.

### **3.5 Ethical consideration:**

Ethical approval was given by the School of Public Health at Al-Quds University and the Helsinki Committees. An admin approval was given for from the Dean of the Faculty of Oral and Dental Medicine at Al-Azhar University (See annex 2). To guarantee participants' rights, a cover letter indicating that the participation is voluntary and confidentiality was assured for all of them. The key informants teaching assistants and students were asked for their permission to record the in-depth interviews. Appointments were made with teaching assistant who agreed to participate in in-depth interviews. For all students in fourth and fifth grade, the researcher gave them a questionnaire after taking their consent and having them complete daily it based on their assessment of the level of patient safety in the clinics in which they work Confidentiality was assured and written consent was taken.

### **3.6 Study instrument:**

This study explores the perception of patient safety at dental clinics in Al-Azhar University in Gaza strip

- **For the quantitative part:** researcher used anonymous self-administered questionnaires Hospital Survey (HSOPS) version 2.0 released 2019 was written in English and translate to Arabic (See annex 3 & 4). Patient safety, error reporting, and event reporting are highlighted in the Hospital Survey on Patient Safety Culture. There are 12 composite measures, or composites, made up of 42 components (see annex 1). In addition to the composites, the survey asks respondents to rate their work area's or unit's patient safety overall and to list the number of events they recorded in the previous 12 months. Additionally, respondents are required to submit some basic demographic data about

themselves (such as their work area or unit, staff position, whether they regularly deal with patients, how long they have been there, etc.)

**The tool assesses 10 domains in patient safety culture:**

Teamwork (3 items)

Staffing and Work Pace (4 items)

Organizational Learning—Continuous Improvement (3 items)

Response to Error (4 items)

Support for Patient Safety from a Clinical Leader, Manager, or Supervisor (3 items)

Communication about Error (3 items)

Communication Openness (4 items)

Reporting Patient Safety Events (2 items)

Clinical Management Support for Patient Safety (3 items)

Handoffs and Information Exchange (3 items)

**Additional composite measures assess:**

Number of events reporting (1 item)

Patient safety rating (1 item)

Background question (4 items)

**- For the qualitative part of the study:**

- 6 focus groups with 48 dental students from fourth and fifth grade and key informative interviews with 12 teacher assistants were selected to participate. The both group's students and the teacher's assistant were asked the same questions. The following questions guide was used:

- What does patient safety mean to you?
- Do you feel that patient safety is an issue of concern in dentistry?
- What are your views on the current management of patient safety in dental clinics at Al-Azhar University?
- Do you think enough has been done to prevent patient safety incidents?
- What more can the college members do to improve our current patient safety standards?

### **3.7 Study period:**

The study started after having Al-Quds University's approval and obtaining ethical approval from the Helsinki Committee in February 2022. The data collection tool was constructed using international tools Hospital Surveys on Patient Safety Culture™ (SOPS®) Version 2.0, which was released by AHRQ in 2019, and translated into Arabic. The pilot study was conducted in May 2022, then data collection began in June, and was completed in September 2022. Data entry and cleaning were conducted in August 2022 and finally, data analysis and writing the final research report were done in the next period till the end of May 2023 (See annex 1).

### **3.8 Study pilot:**

Pilot research was completed before the quantitative study to make sure the survey was appropriate for use in dentistry clinics. To evaluate the suitability of the study's instrument, train the researcher in data collection, and examine the simplicity of scales, meanings, and response times, 27 dentistry students were surveyed. The main study did not include the responses from the pilot study. To prevent any potential bias, the results of the pilot research were disregarded.

### **3.9 Scientific rigor**

#### **3.9.1 Reliability**

The reliability of an instrument is the level of consistency with which it estimates the trait being measured is assumed. In order to ensure proper entry technique and reduce entry errors, 5% of the data were re-entered after data entry was complete.

The test is repeated to the same sample pilot study of 27 dental students on two occasions and then compares the scores obtained by computing a reliability coefficient. Can be achieved by using Cronbach's Alpha coefficient and Table (3.1) shows the values of Cronbach's Alpha for each patient safety culture domain of participants. Table 3.1 illustrated the reliability of domains; values of Cronbach's Alpha were in the range of 0.74 and 0.94. Cronbach's alpha equals 0.860 for the entire patient safety culture domains in the pilot sample, which indicates good reliability of the entire questionnaire and the domains. The data was collected according to the good reliability obtained from the pilot study.

**Table (3.1): Reliability of the research for each domain of the patient safety**

<b>Dimensions</b>	<b>Cronbach Alpha</b>
Teamwork within dental units	0.94
Communication about error	0.77
Communication openness	0.94
Supervision	0.854
Staffing	0.911
Transition and handoff	0.841
Response to error	0.9
Organizational learning	0.847
Dental clinic management support for patient safety	0.741
<b>Total</b>	<b>0.860</b>

**- Qualitative part (focus groups)**

Peer assessment of the focus group questions was done to make sure all relevant dimensions were covered and to assure the validity of the qualitative section of the study see (annex 6). Additionally, by recording the focus group talks, the correctness of the transcripts could be checked and the facts could be tracked. In order to trace the material if necessary, all transcripts and recordings were saved.

### **3.9.2 Validity**

The validity of an instrument considered as a determination of the extent to which the instrument actually reflects the abstract construct being examined. Validity refers to how well the instrument estimates what the measurement is supposed to do. The absence of systematic errors in the measuring instrument indicates high validity (Mohajan, 2017).

The questionnaire (available in both English and Arabic) was created by modifying tried-and-true tools to better meet the goals of the research. The instrument was attractively laid out to guarantee face validity. This comprised a visually pleasing arrangement, an orderly flow of questions, and instructions that were introduced before the questions. Prior to the real data collection, a pilot study was carried out to assess how well clients understood the questionnaire and how they responded to it. This would improve the questionnaire's validity when it was modified to make it more understandable. Additionally, general validity, trustworthiness, and reliability (for the qualitative) measures were used, such as:

- Speaking with a sufficient number of participants (appropriate sample)
- Tool standardization
- Making use of techniques that are acknowledged globally
- Standardizing implementation

For web survey:

- Do not compel respondents to respond to each question.
- Design for mobile devices.
- Avoid drop-down boxes.
- Display previous and next page buttons.
- Ensure that there is no horizontal scrolling and a limit on vertical scrolling.
- Provide a thank you page.

(Confidential surveys only) Allow answers to be saved automatically on each page.

### **3.10 Data collection:**

Self-administered tools (modified and translated Arabic version of HSOPSC version 2) were used. Questionnaires were distributed to the fourth and fifth grades in the university to complete them electronically. A check was made to make sure responses were entered and accurately recorded in the data file, preventing the file from including invalid values. To confirm that there were no programming problems in the web survey, the data were again checked to make sure that all responses fell within the acceptable range. The process of data collection took around 3 months.

In the second part, the qualitative study: the researcher conducted a focus group with the dental students and a key informative interview with a teacher assistant through the second semester. Most of the interviews were carried out in the dentists' offices and for some of the focus groups were done online using the Zoom platform. The interviews lasted between 50 to 70 minutes, averaging 60 minutes. Interview continued until data saturation has been achieved. The interviews were audio-recorded.

### **3.11 Data entry and analysis**

The quantitative part of the study: Data was coded, tabulated, and analyzed using Statistical Package of Social Science (SPSS program version 25 for Windows) (IBM Corporation, USA, Armonk, New York). The data were described using frequency tables. The responses on the Likert scale were coded to numerical values "from 1 to 5." The value of "1" was given to strongly disagree and the value of "5" was given to strongly agree. And the value "9" was given to Does not apply/Don't know. Negative statement in the influence section "There is a problem with disrespectful behavior by those working in this unit." Responses are reversed to calculate the survey size and percentage of positive responses to items. Affirmative responses were "agree/strongly disagree" for questions posed positively and "disagree/disagree completely" for questions posed negatively.

The frequency distribution, skewness, and kurtosis of the data were examined. Kolmogorov–Smirnov test is also performed. Frequency tables were used to describe the frequency of certain letters. Some statistical tests were used as appropriate such as percentage (%), means and standard deviation (SD), t-test to assess whether the means of two groups are statistically different from each other, One-way analysis of variance (ANOVA) test to determine whether there are any significant differences among the means of more than two independent groups. Finally, the Probability value (P-value) less than 0.05 was considered statistically significant.

Safety dimensions are considered strong when the proportion scored 75% or higher, whereas dimensions that need work are those where the percentage scored less than 50% and moderate between 50% and 75% (Sorra, et al., 2011).

The qualitative part of the study: All interviews were transcribed and analyzed using the Framework method. Charting of the transcribed data were conducted according to key issues and themes developed by researcher Ritchie and Spencer in 1989s. An Excel spreadsheet was used to record the transcribed data of each subject in one column. These were then read by the two interviewers independently and salient comments were extracted into a second column often the same spreadsheet. Both interviewers discussed the salient comments identified from each transcript before agreeing to index them in a third column to arrive at a thematic framework. The thematic framework is repeatedly refined as more transcripts are analyzed. Refinement was completed when researchers agreed upon the thematic framework.

### **3.12 Limitations**

There are some limitations in this study that are typical of this kind of cross-sectional and descriptive design. Mixed methods studies were labor-intensive and required greater resources and time, the objective answer for the participant, the validity of the result, the lack of or inadequate knowledge and previous studies in the dentistry field, and the reliance on patient safety concepts, theories, and practices that were developed and applied in high-income resource-rich nations. The researcher relied only on the staff's view of safety culture, and patients' views were not considered. Finally, contextual limitations include electricity cuts, ongoing conflict, and limited access to international publications. Having that said, the researcher kept in mind these limitations during writing the thesis.

## Chapter Four

### Result and Discussion

In this chapter the conclusions from the examination of data gathered are illustrated: data analysis reveals descriptive, statistically based analysis and focus groups based qualitative data analysis.

#### 4.1 Descriptive analysis

##### 4.1.1 Students and staff characteristics:

The socio-demographic characteristics that were studied included gender, education level and place of live (Table 4.1).

**Table (4.1): Distribution of responses according to participants' characteristics**

<b>Variables</b>	<b>Number</b>	<b>%</b>
<b>The place of living</b>		
North Gaza	30	14.2
Gaza City	106	50.2
Middle Zone	31	14.7
Khan Younis	24	11.4
Rafah	20	9.5
<b>Total</b>	<b>211</b>	<b>100.0</b>
<b>Gender of participant</b>		
Male	44	20.9
Female	167	79.1
<b>Total</b>	<b>211</b>	<b>100.0</b>
<b>Education level</b>		
Fourth level	126	59.7
Fifth level	85	40.3
<b>Total</b>	<b>211</b>	<b>100.0</b>



Most of the study participants were 79.1% female and 20.9% male. This is due to the fact that the distribution of students in academic groups the females are higher than males by approximately 1 male to 4 females.

With regard to housing, that half of the participants in the study are residents of Gaza, while 15.1%, 14.3%, 11.8%, and 8.8% of them live in the Middle zone, North, Khan Younis, and Rafah, respectively, because the students of the south, due to the remoteness of their residence, do not wish to enroll in Al-Azhar University due to its distance and the need for a long time and effort. When the researcher asked the students of the south, the students of the south said:” during the study period, move to live in Gaza in order to save themselves time, effort, and money.”

The distributions of the study population according to education levels showed that the highest group of the study population was enrolled in the fourth level (59.7%) while 41.6% of them enrolled fifth level. And according to the staff were 7 female and 5 male and their age between 26 and 34 years old.

#### **4.1.2 Patient safety culture domains:**

As shown in Table (4.2) the patient safety domains score, which displays the mean percentage score for the 10 safety culture domains, to highlight the overall picture of safety culture 68.45% determined to be the overall mean score for perceptions of the patient safety culture.

The strongest domain of patient safety domains is teamwork as it received a score means of more than %73. on the other hand, the reporting patient safety errors, with a score means of about 61.2. This indicates that there is still a need for improvement in these dimensions.

**Table (4.2): Distribution of responses by means' percentages of safety culture domains**

<b>Domains of patient safety culture</b>	<b>No of items</b>	<b>Mean %</b>
Staffing and workplace	4	64.85
Teamwork	3	81.16
University management support for patient safety	3	73.
Organizational learning	3	53.1
Supervisor Manager	3	71.37
Communication about error	3	72.88
Response to error	4	66.32
Reporting patient safety events	2	61.2
Communication openness	4	64.4
Handoffs and information exchange	3	68.08
<b>Total PS score</b>	<b>32</b>	<b>68.45%</b>

#### **4.1.3 Unit level domains:**

##### **– Teamwork:**

Teamwork within the unit had the highest score means 81.16%.is higher than studies conducted in Saudi Arabia and lower the Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 72.3% and 85% respectively.

The positive response means of participants (90%) reported that in this unit, we work together as an effective team. These high percentages in the work of the staff as a team indicate its great awareness, keenness, and responsibility to deliver the appropriate treatment to each patient in a timely manner so that it returns the maximum benefit to the patient without harm.

The positive response means of participants (87.67%) reported that during busy times, staff in this unit help each other. This emphasis that there is efficient and effective teamwork provides treatments with high quality for patients. And their high productivity as all the members of the staff operate as a team and patient safety problems are reduced.

There appropriate treatment and no one left without receiving treatment, and this all confirms the mutual and intensified work of the staff, which is based on respect. And the positive response means of participants (84.36%) reported There is a problem with disrespectful

behavior by those working in this unit “This confirms the prevalence of an atmosphere of high medical ethics between students and staff, and all this in turn contributes to providing high quality service to the patient with the fewest possible medical errors.

As a student in the fifth level explained: *We work in clinics as one family in an effort to satisfy the patient and for him to leave the clinic and get the appropriate treatment.*

As one of the supervisors also said, *I do not care if this is my case or not. When my colleague is sick or he encounters a problem while providing treatment to the patient, I quickly go to my colleague and help him provide the appropriate treatment for the patient, in order to preserve the patient’s safety until he leaves the clinic and is satisfied with the treatment services provided to him.*

From the previous results, the researcher confirms the presence of an effective team within the clinics that cooperates in tasks, manages medical errors, solves problems, and exchanges opinions and suggestions in an atmosphere of respect and trust between staff and students, and this, in turn, enhances the preservation of patient safety.

**Table (4.3): Distribution of responses in relation to teamwork within unit domain**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive response
In this unit, we work together as an effective team	No	0	8	13	151	39	211	4.05	80.94	90
	%	0.0	3.8	6.2	71.6	18.5	100			
During busy times, staff in this unit help each other	No	1	10	15	142	43	211	4.02	80.47	87.67
	%	0.5	4.7	7.1	67.3	20.4	100			
There is a problem with disrespectful behavior by those working in this unit*	No	72	106	17	15	1	211	4.1	82.08	84.36
	%	34.1	50.2	8.1	7.1	0.5	100			
<b>Total</b>								<b>4.06</b>	<b>81.16</b>	<b>87.34</b>

\*The mean was inverted due to the negative word or negative expression of the questions

### **- Staffing:**

Staffing within the unit had a score of 64.85%.is higher than studies conducted in Saudi Arabia and Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 10% and 23% respectively.

The positive response means (35.07%) reported that in this unit, we have enough staff to handle the workload. These low percentages are due to the fact that some cases are complicated or enter into complications, so the supervisor is forced to supervise the case and treat it, and this leads to waiting for the rest of the cases on the dental chairs, waiting for the supervisor to finish the case, and this constitutes severe pressure on the patient because waiting for a long time, The student also has a lot of pressure because the patients who are waiting at the reception will leave. Despite this, the students must complete a certain number of cases at a certain time so that they don't not fail, and this all affects the student's performance.

As one of the students in the fourth level said: "Waiting a long time until we enter the patient for treatment because all dental chairs have patients who receive treatment and the lack of sufficient academic staff in the clinics affects my performance and dealing with the patient, and the patients every time they wait for a long time express their extreme annoyance and unwillingness to receive treatment"

Another student in the fifth level:" *Once, one day, the supervisor and I took a long time to provide treatment to a patient, and the other patient who was sitting in the reception had to wait for a long time. When his turn came, the patient was afraid and told me, I want the supervisor to treat me, not you. It seems that you take a long time to provide treatment because you are training.*"

This of course affects the patient's safety., and one of the fifth-level students said: "*In the clinic of maxillofacial surgery, if the case changes from a simple tooth extraction to a surgical tooth extraction, the remaining dental chairs will wait until the supervisor finishes, and the patients' complaints spread in the place because they have working appointments and they cannot wait*".

These percentages and the opinions of students at both levels confirm the need to increase the academic staff in the clinics, even when complications occur or when dealing with complex treatment that does not affect the rest of the patients.

The researcher emphasizes here on increasing the number of academic staffs in the clinics while giving them continuous training courses to increase their experience, information and their dealing with complications, because this in turn improves the performance in the clinics and raises the scientific and practical level of students and increases patients' satisfaction with the quality of services provided.

**Table (4.4): Distribution of responses in relation to staffing domain**

Items	Strongly Disagree		Disagree	Neutral	Agree	Strongly Agree	Total	Mean	Mean %	% of positive response
In this unit, we have enough staff to handle the workload	No	11	71	55	71	3	211	2.92	58.48	35.07
	%	5.2	33.6	26.1	33.6	1.4	100			
Staff in this unit work longer hours than is best for patient care*	No	5	70	79	50	7	211	3.07	61.51	35.54
	%	2.4	33.2	37.4	23.7	3.3	100			
This unit relies too much on temporary, float, or PRN staff*	No	8	93	60	47	3	211	3.26	65.3	47.86
	%	3.8	44.1	28.4	22.3	1.4	100			
The work pace in this unit is so rushed that it negatively affects patient safety*	No	27	123	38	18	5	211	3.70	74.12	71.09
	%	12.8	58.3	18.0	8.5	2.4	100			
<b>Total</b>								<b>3.23</b>	<b>64.85</b>	<b>47.39</b>

\*The mean was inverted due to the negative word or negative expression of the questions

#### – **Organization learning:**

Organization learning within the unit had a score means of 53.14%.is lower than studies conducted in Saudi Arabia and Oman (Al Sweleh et al., 2018) & (Lawati et al., 2019) with 67.5% and 84% respectively.

The positive response means (63.98%) reported that this unit regularly reviews work processes to determine if changes are needed to improve patient safety. and the positive response means (5.21%) reported that in this unit, changes to improve patient safety are evaluated to see how well they worked. also, the positive response means (8.05%) reported that in This unit lets the same patient safety problems keep happening.

These percentages show that this aspect has a weakness, as the work and performance of the students are reviewed and they are presented for treatment continuously to identity the necessary changes, but the changes are not reviewed and evaluated on the ground to explorer how they affect and their impact.

Because the university system does not have a fixation system of teaching assistant, and there is a periodic change of teaching assistants, so finding a protocol and evaluating and implementing changes is difficult because the staff changes continuously and is not constant, and because the university's financial resources sometimes have a severe shortage, so the college administration cannot implement changes that require large financial resources.

*As one of the teacher's assistants said: "set protocols and instructions within the same section to be circulated to students, but due to the change of staff, these protocols change and are not applied, and this in turn affects the safety of the patient, of course."*

*As one of the students of the fifth level said: "I asked the college administration to provide us with a device that brings us a membrane that the surgeon put in the surgical extraction sockets that helps heal wounds quickly, but it was not available, although its price is acceptable."*

Therefore, everyone has administrative role in the clinics and must make every effort to develop the educational and learning environment, make effective changes on the ground, and hold discussions at all levels, including students, teaching assistants, nurses, and administrators, to put in place the necessary changes and evaluate them constantly in order to avoid any harm to the patient and obtain the best-desired result from the treatment.

**Table (4.5): Distribution of responses in relation to organization learning domain**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive response
This unit regularly reviews work processes to determine if changes are needed to improve patient safety	No	1	22	53	122	13	211	3.59	71.75	63.98
	%	0.5	10.4	25.1	57.8	6.2	100			
In this unit, changes to improve patient safety are evaluated to see how well they worked	No	38	133	29	9	2	211	2.07	41.42	5.21
	%	18.0	63.0	13.7	4.3	0.9	100			
This unit lets the same patient safety problems keep happening*	No	2	15	40	144	10	211	2.31	46.25	8.05
	%	0.9	7.1	19.0	68.2	4.7	100			
<b>Total</b>								<b>2.65</b>	<b>53.14</b>	<b>25.74</b>

\*The mean was inverted due to the negative word or negative expression of the questions

#### – Response to error:

Response to an error within the unit had a score of 66.32%. is higher than studies conducted in Saudi Arabia and Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 10.9% and 27% respectively.

A positive response from participants (47.86%) was that when an incident was reported in this unit, it felt like writing about the person rather than the problem. A positive response from participants (45.02%) also reported that "this unit lacks support for staff involved in patient safety errors".

These percentages moderate, and this is due to the students' fear of punishment, whether with grades or deprivation of entry to clinics.

Where one of the students in the fifth level said: *"If the student makes a mistake, the supervisor meets with the students and alerts them to the mistake without exposing the student's name and not embarrassing him."* However, one of the students in the fifth level also said something that opposes his colleague: *"He said, I am afraid that if I made a mistake, it would be tantamount to a crime you committed."*

The researcher explains the contradiction in the opinions of the students because there is a different teacher assistant in the clinics, and dealing with students is different from one clinic to another and from one supervisor to another. Some of them support that the focus is on the wrong and not on the student, unlike other departments, the focus is on punishing the student and failing them sometimes.

And one of the teaching assistants stated: *"If one of the teaching assistants in the dental clinic makes a medical error or a problem in supervising or dealing with students, the department head will alert this teaching assistant in private and discuss with him alone."*

Clinic management must stress all college staff, meet with them, and set policies for how to deal with medical errors without defamation of the student or teaching assistant, and this is to support the learning environment and benefit from mistakes in dental clinics.

Here, the researcher confirms the stresses of finding a unified system among the clinics in which the medical errors that may result from the student and the degree of their punishment are determined. Thus, dental students guarantee that teaching assistants will not be biased or increase the penalty for any student who commits a mistake, so this maintain an educational institution whose priority is to preserve the patient and his safety.

**Table (4.6): Distribution of responses in relation to response to error domain:**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive response
In this unit, staff feel like their mistakes are held against them. *	No	19	110	55	23	4	211	3.55	71.09	61.13
	%	9.0	52.1	26.1	10.9	1.9	100			
When an event is reported in this unit, it feels like the person is being written up, not the problem....*	No	15	86	45	48	17	211	3.16	63.22	47.86
	%	7.1	40.8	21.3	22.7	8.1	100			
When staff make errors, this unit focuses on learning rather than blaming individuals	No	17	33	37	102	22	211	3.37	67.48	58.76
	%	8.1	15.6	17.5	48.3	10.4	100			
In this unit, there is a lack of support for staff involved in patient safety errors*	NO	4	91	59	52	5	211	3.17	63.5	45.02
	%	1.9	43.1	28	24.	2.4	100			
<b>Total</b>								<b>3.31</b>	<b>66.32</b>	<b>53.19</b>

\*The mean was inverted due to the negative word or negative expression



– **Supervisor:**

The existence of good supervision and management in all departments of the clinics stimulates and supports patient safety, as the percentage of the supervisor in the researcher's study reached 71.37%. Is higher than studies conducted in Saudi Arabia and Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 45.7% and 59% respectively.

The positive response for the participants (62.08%) reported that in my supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety. The positive response for the participants (88.62%) reported that my supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention.

These percentages emphasize the role of positive supervision in the college, where any suggestions from any level, whether students, teaching assistants, nursing, or heads of departments for higher levels, are considered and they try hard as much as possible to provide them and work on these suggestions.

And of course, our supervision, even in conditions of stress and lack of time, does not allow the steps to be shortened, because this, in turn, affects the patient's safety.

As one of the teaching assistants said, "*Sometimes I have to give students compensatory sections studies and alternative days in case there is the pressure at work or missing some working days for them so that I do not reduce the requirements for students and they complete their work quickly which affects their performance.*"

Every health professional and all the staff in the organizations must play the position of either a supervisee or supervisor at some point in their career, which not only helps the organization and practitioner but also enhances patient care (Martin et al., 2021).

**Table (4.7): Distribution of responses in relation to supervisor domain**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive response
My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety	No	4	27	49	116	15	211	3.52	70.52	62.08
	%	1.9	12.8	23.2	55	7.1	100			
My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts.*	No	17	92	28	62	12	211	3.18	63.79	51.65
	%	8.1	43.6	13.3	29.4	5.7	100			
My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention	No	1	6	17	157	30	211	3.99	79.81	88.62
	%	0.5	2.8	8.1	74.4	14.2	100			
<b>Total</b>								<b>3.56</b>	<b>71.37</b>	<b>67.45</b>

– **Communication about error:**

Communication about the error is considered one of the most important pillars for maintaining patient safety and providing health services with high quality, as the presence of ineffective Communication about the error at all levels in the college between students, teaching assistants, and administration, is considered one of the main reasons for the occurrence of medical errors and negatively affecting patient safety.

The communication about error had a score of 72.88%, it's higher than studies conducted in Saudi Arabia and Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 40.5% and 65% respectively.

The positive response of participants (71.56%) reported agreed that when errors happen in this unit, we discuss ways to prevent them from happening again. and the positive response of participants (70.14%) was that we are informed about errors that happen in this unit. The percentages obtained by the researcher show that there is effective communication in clinics where mistakes are discussed. Medical and awareness-raising about it and ways to prevent it are also discussed so that no harm to the patient is repeated.

The researcher also emphasizes the need to emphasize at all levels by holding periodic meetings to discuss medical errors that occur or may occur on the patient and affect his receiving treatment negatively.

One of the fifth-level students said: *"When a student makes a mistake, a meeting is held for all students in the clinic, making them aware of the mistake, and discussing ways to prevent it."*

As one of the teaching assistants said: *"When one of the teaching assistants notices that a student has made a mistake, the academic staff generalize the ways to prevent this mistake. Lectures are made and speak to the students until it is prevented and the students are persuaded of the extent of the seriousness."*

Here, the researcher confirms the existence of an encouraging atmosphere in the clinics to speak and discuss the medical errors that occur in the clinics, talk about them, and give lectures to discuss ways to manage, deal with and prevent them, and this confirms that the staff in the clinics maintain the safety of the patient and that it is considered among the priorities of the staff.

**Table (4.8): Distribution of responses in relation to Communication about error domain**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive responses
We are informed about errors that happen in this unit	No	4	20	39	127	21	211	3.67	73.36	70.14
	%	1.9	9.5	18.5	60.2	10	100			
When errors happen in this unit, we discuss ways to prevent them from happening again	No	5	22	33	132	19	211	3.65	73.08	71.56
	%	2.4	10.4	15.6	62.6	9	100			
In this unit, we are informed about changes that are made based on event reports	No	1	19	53	126	12	211	3.61	72.22	65.40
	%	0.5	9.0	25.1	59.7	5.7	100			
<b>Total</b>								<b>3.64</b>	<b>72.88</b>	<b>69.03</b>

\*The mean was inverted due to the negative word or negative expression

#### **- Communication openness:**

To speak freely about your ideas, suggestions, developments, and criticisms, positive and negative, with your colleagues and your manager, allowing us to work freely for the sake of patient safety.

The communication openness score of 64.4% is higher than studies conducted in Saudi Arabia and lower than in Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 23.5% and 68% respectively.

The positive response for the participants (41.2%) reported that in this unit, staff speak up if they see something that may negatively affect patient care .and the positive response for the participants (40.7%) reported that when staff in this unit see someone with more authority doing something unsafe for patients, they speak up. Also, the positive response for the participants (36.4%) reported that in this unit, staff are afraid to ask questions when something does not seem right.

the low percentages mentioned above, and this indicates a defect in allowing workers to speak freely about what is going on around them in terms of ideas or observations, and it showed that they do not speak freely if they see medical errors occurring, from a colleague, especially if the error is from a higher position like a supervisor or department head, and this, in turn, is due to fear Students from the impact of this on their evaluation or the change in the supervisor's dealings for the worse if he criticizes him, and this, in turn, indicates the need to support communication freely and urge the entire staff in the clinics and students to ask and inquire without fear in the event that they see any event that affects or may affect the patient's safety.

As a fifth-level student reported: *If I see my colleague made a medical mistake, I advise him, but it is difficult for me to advise some supervisors for fear that my evaluation will be affected.*

But another student objected and said: *To advise the supervisor if he made a medical error or treatment steps that are not ideal varies from department to department and the department, itself varies from one supervisor to another.*

The aforementioned speech and lineage confirm the need to disseminate and circulate to all departments and supervisors the necessity of making an environment that allows students to ask and inquire about any procedure without fear or any punishment because this environment will support and motivate the student to provide the ideal treatment for the patient and make the patient's safety a priority.

The researcher emphasizes on the decision makers at Al-Azhar University and in the College of Oral and Dental Medicine to support an environment that allows and encourages students to inquire about all medical errors and procedures without restricting them and without affecting their academic evaluation or treatment later, because this allows for the production of the personality of a doctor who is able to deal with patients and criticize error and correct it and contribute to raising the quality of medical services provided to individuals

**Table (4.9): Distribution of responses in relation to communication about openness domain**

Items		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Mean	Mean %	% of positive response
In this unit, staff speak up if they see something that may negatively affect patient care	No	8	52	64	82	5	211	3.11	62.27	41.23
	%	3.8	24.6	30.3	38.9	2.4	100			
When staff in this unit see someone with more authority doing something unsafe for patients, they speak up	No	8	45	72	75	11	211	3.17	63.41	40.75
	%	3.8	21.3	34.1	35.5	5.2	100			
When staff in this unit speak up, those with more authority are open to their patient safety concerns	No	5	20	38	124	24	211	3.67	73.45	70.14
	%	2.4	9.4	18	58.8	11.4	100			
In this unit, staff are afraid to ask questions when something does not seem right*	No	12	65	44	75	15	211	2.92	58.48	36.49
	%	5.7	30.8	20.9	35.5	7.1	100			
<b>Total</b>								<b>3.21</b>	<b>64.4</b>	<b>47.15</b>

\*The mean was inverted due to the negative word or negative expression

#### – Reporting patient safety error:

Reporting patient safety error had a score of 61.2 % higher than studies conducted in Saudi Arabia and Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 39.8% and 40% respectively.

this is an acceptable low percentage but. Efforts must be intensified to work and strengthen students and supervisors to write reports of medical errors that have occurred or may occur to the patient because this supports the learning environment in dental school for students and reduces errors that may reach the patient.

However, 88.6% of respondents always and often reported that “When a mistake is caught and corrected before reaching the patient, how often is this reported? And 53.6% of respondents always and often reported that “When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported?”.

From the previous values, there is a high percentage of students who write reports of medical errors before they reach the patient, on the other hand, a low percentage of those who write reports of medical errors after they reach the patient, and this, in turn, reflects the student's fear of receiving punishment from the clinic official, and from here the researcher stresses that an interactive learning environment must be circulated in clinics, and mistakes are discussed freely and an emphasis on how to manage errors and prevent their occurrence.

A documentation system must be created in the clinics to write and document any medical errors, to benefit from it and alert it, and all of this in turn supports the student to provide a health service with high quality to the patient without harm and to maintain the patient's safety.

As one of the students in the fifth level said: *"the college do not have a system that teaches us to write reports of medical errors. All our efforts are individual efforts."*

As a student in the fourth level said: *"You may see encouragement from one of the supervisors to write a report about the medical error that issued, which happened to me, and the supervisor asked me to make a seminar for the students to generalize the benefit."*

As one of the teacher's assistants said: *"If a medical error occurred on the part of the students, they inform us immediately, and the teacher assistant deal with the case and provide it with the best possible treatment, but this is not documented on paper or on a system."*

the results appear when there is harm to the patient, whether it occurred or not, or affected the patient negatively or not, the percentage of its reporting and informing the error to the supervisor high and the case is dealt with and took the full treatment, but there is no system for writing reports of medical errors and documenting them, as the qualitative study previously showed.

**Table (4.10): Distribution of responses in relation to reporting patient safety error domain**

Items		Never	Rarely	Sometimes	Often	Always	Total	Mean	Mean %	% of positive response
When a mistake is caught and corrected before reaching the patient, how often is this reported?	No	2	7	15	104	83	211	3.21	64.2	88.6
	%	0.9	3.3	7.1	49.3	39.3	100			
When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported?	No	6	34	58	97	16	211	2.91	58.2	53.6
	%	2.8	16.1	27.5	46.0	7.6	100			
<b>Total</b>								<b>3.06</b>	<b>61.20</b>	<b>71.1</b>

\*The mean was inverted due to the negative word or negative expression

#### – Dental clinics management support for patient safety:

Dental clinic's management support for patient safety has a score of 73.7% is lower than studies conducted in Saudi Arabia and Oman Al Sweleh et al., 2018) and (Lawati et al., 2019) with 84.5% and 75% respectively.

The positive response for participants (88.6%) reported that the actions of dental clinic management show that patient safety is a top priority. The positive response for participants (53.5%) reported that Dental clinic management provides adequate resources to improve patient safety.

From the previous percentages that the issue of patient safety concerns managers at all levels of administration and is a priority for supervisors in the college, where one of the students in the fourth level said: *“It is possible for a student to receive a denial of the subject if the supervisor discovers that there is harm that has occurred from us to the patient and according to the degree The actual danger is the penalty, and it may reach failure if the harm is severe”*.



However the percentage of providing resources regarding patient safety has decreased significantly, as there suffering in providing resources, whether simple materials or devices need for treatment, because the requests take a long time for the university administration to provide them, and Some dental devices require a high cost, and sometimes the university does not provide them due to the lack of financial resources this, in turn, affects the safety of the patient.

One of the teacher assistants said: *"I asked them to provide an emergency bag and oxygen for a long time so that when there is emergency cases, the staff treat them before the ambulance arrives."*

Here, the researcher emphasizes the administration of the college, in contact with the university administration, to equip the clinics with resources and the latest equipment to ensure the provision of excellent and ideal treatment and service to the patient to ensure patient safety.

**Table (4.11): Distribution of responses in relation to dental clinics management support for patient safety domain:**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive response
The actions of dental clinic management show that patient safety is a top priority	No	2	7	15	104	83	211	4.2	84.54	88.62
	%	0.9	3.3	7.1	49.3	39.3	100			
Dental clinic management provides adequate resources to improve patient safety	No	6	34	58	97	16	211	3.39	67.86	53.55
	%	2.8	16.1	27.5	46.0	7.6	100			
Dental clinic management seems interested in patient safety only after an adverse event happens*	No	17	116	30	38	10	211	3.43	68.72	63.03
	%	8.1	55	14.2	18	4.7	100			
<b>Total</b>								<b>3.67</b>	<b>73.7</b>	<b>68.4</b>

– **Handoffs and information exchange:**

Handoff and transition have a score of 68.08% it's lower than studies conducted in Saudi Arabia and higher than in Oman (Al Sweleh et al., 2018) and (Lawati et al., 2019) with 70% and 46% respectively.

The positive response for participants (51.65%) reported that when transferring patients from one unit to another, important information is often left out. The positive response for participants (61.61%) reported that during shift changes, important patient care information is often left out.

The response of neutral students is high, and this is due to the lack of coordination or cooperation between the departments and the lack of computerized information systems units between the different clinics.

Each department has its own patients and they provide the appropriate treatment for the patient in a way that suits the department in which the patient is located. There is no cooperation between the departments to provide an integrated treatment for the patient. However, the students answered the previous percentages regarding one department, as each department has paper patient files in which the patient's data is recorded and the appropriate treatment is indicated. For the patient who was presented to him, and if the student came to provide treatment for a patient in the same department, the patient's paper data will be preserved, but from department to department, this matter is difficult, especially since there is no computerized information system to record patient data.

As one of the students of the fifth level said: *"The paper files in which the patient's data were recorded help us if the students need them in the same semester and for the same department. If there is need to complete the treatment for the patient in the same department, the students find them in the patients' files, such as x-rays and personal and pathological data."*

But a fourth-level student added: *"But unfortunately, in the semester that follows, these paper files and x-rays, because they are disposed of will not be found."*

This, in turn, confirms the need for an integrated, collaborative, unified system between clinics, in which information is stored, x-ray images and everything related to the patient is stored.

**Table (4.12): Distribution of responses in relation to handoffs and information exchange domain**

Domain/questions		S/Disagree	Disagree	Neutral	Agree	S/Agree	Total	Mean	Mean %	% of positive response
When transferring patients from one unit to another, important information is often left out*	No	15	94	49	42	11	211	3.28	65.68	51.65
	%	7.1	44.5	23.2	19.9	5.2	100			
During shift changes, important patient care information is often left out*	No	17	113	54	25	2	211	3.55	71.18	61.61
	%	8.1	53.6	25.6	11.8	0.9	100			
During shift changes, there is adequate time to exchange all key patient care information	No	2	28	80	92	9	211	3.37	67.39	47.86
	%	0.9	13.3	37.9	43.6	4.3	100			
<b>Total</b>								<b>3.40</b>	<b>68.08</b>	<b>53.7</b>

\*The mean was inverted due to the negative word or negative expression

To sum up, patient safety is essential to the caliber of healthcare and is still a problem for dentists in many nations, particularly Palestine. An essential first step in enhancing patient safety is to examine and comprehend an organization's safety culture. Similarly, to this, evaluating safety culture assists healthcare organizations in identifying areas for development and tracking changes over time (Webair et al., 2015).

Establishing a culture of safety within healthcare institutions is a crucial first step to enhancing the quality of care in all areas (Sorra et al., 2012). To address problematic behaviors or attitudes like misconceptions, adverse incidents, and a non-punitive reaction to mistakes, which can improve the safety culture of dentistry, it is crucial to understand the safety culture. In a manner similar to this, assessing the safety culture in dentistry can help in identifying issue areas that may result in errors and bad effects. Some of the areas that must be worked on to enhance patient safety in university dental colleges is to find a unified

system among all clinics to write medical errors and how to manage them and to disseminate the results to all departments and students in order to avoid their occurrence. there must be work to increase the teaching staff and specialists in the clinics and to work on training them continuously.

One of the important aspects that the faculty encountered is to strengthen the improvement the service provided in dental clinics is the organizational learning in the university so that medical errors are constantly evaluated and ways to prevent them are discussed and the necessary developments are made in order to provide the patient with the best quality of treatment and with less damage.

Because there has been no research on patient safety in dentistry, creating an atmosphere for patient safety may be difficult in dental school in Gaza. Another difficulty is that university dentistry clinics are dispersed, in contrast to hospitals, which consist of a single facility.

Therefore, there must be cooperation from managers and decision makers in the university at all levels in supporting all aspects of patient safety including improving the the educational environment that helps in reporting and learning from mistakes that occurs and learn from them.

The conclusion one can draw from the literature is that altering how frontline healthcare professionals view patient safety will lead to a decrease in adverse events and communication breakdown. This is the most reliable and effective strategy for improving the quality of care (Sorra et al., 2012).

The degree of safety perceived within the organization had an impact on the safety of the employees and patients in a healthcare setting. The HSOPSC survey was used to evaluate the patient safety culture at the university, identify its strong and weak points, and make improvements where necessary. An essential component of achieving patient safety is incident reporting (Zwart et al., 2011).

Patient safety in primary care and especially in dentistry is an emerging field of research in Western countries (Wetzels et al., 2008). There must be work on a computerized incident reporting system that aids in recording and following up on incidents is required for dentistry colleges and universities, much like hospitals. The results of this study indicate that the system created should contain both a centralized reporting system and a medical error

reporting system that would track incidences within the dental clinic. While a central approach addresses the frequent and ongoing safety hazards, local approaches encourage reporting and speed up implementation.

#### **4.1.4 The outcomes of patient safety domains in dental clinics -Al Azhar University:**

- **Reporting error:**

- **Dental students and patient safety events information**

Table (4.14) illustrated that the majority of the study population haven't any patient safety events reported in the past 12 months (70.1%) while 25.6% of them have reported patient safety events from 1 to 2 times and 4.3% from 3 to 5 times.

This indicates that the system for writing reports of medical errors suffers from weakness, and this is confirmed by the percentage of students who answered that they do not have a system for writing reports of medical errors in dental clinics, at a rate of 59.2%.

The teaching hospital assumes the existence of a system for writing reports of medical errors from the basics of the college so that the results can be disseminated to the rest of the students and the rest of the departments, there a decrease in the percentage of students who answered that there was a system for writing errors, as their percentage was 40.8%.

The researcher explains that this percentage answered that there is a system for writing errors due to most of the students had a misunderstanding of the documentation mechanism, as some students explained that documentation is telling the supervisor of the medical error orally. Here, the researcher stresses the need to find a system for writing medical errors, documenting them, and treating patients in cooperation between departments, in order to maintain patient safety at the highest level.

**Table (4.13): Distribution of the dental students according to their patient safety events information**

Variables	Groups	Frequency (n)	Percentage (%)
3. Number of patient safety events have you reported in the past 12 months	None	148	70.1%
	1 to 2	54	25.6%
	3 to 5	9	4.3%
4. Is there a reporting system for patient safety incidents in the clinics in which you are trained at the university?	Yes	86	40.8%
	No	125	59.2%
5. If accidents related to the safety of the patient occurred or were witnessed, whether they were harmed or not, or reached the patient or did not even arrive, but they are considered a danger to the safety of the patient, to whom do you report this accident	No	3	1.4%
	Staff/instructor of the course	86	40.8%
	Supervisor	122	57.8%
6. How would you rate your unit/work area on patient safety?	Poor	2	0.9%
	Good	20	9.5%
	Very Good	110	52.1%
	Excellent	79	37.5%

The results showed that 40.8% of the students indicate have a reporting system for patient safety incidents in the clinics in which they are trained at the university and this is a low percentage.

As shown in Table (4.14) the majority of the study population reported the accident to the supervisor if accidents related to the safety of the patient occurred or were witnessed, whether they were harmed or not, or reached the patient or did not even arrive, but they are considered a danger to the safety of the patient, (57.8%) while 40.8% of reported the accident to staff/instructor of the course and 1.4% is not reported the accident.

The researcher explains here that the students are among their most important priorities: patient safety, as the results showed that 98.6% of those who report to the supervisor or to the teacher's assistant about the occurrence of a medical error during treatment so that they provide the appropriate treatment, correct the errors, and avoid complications, and only 1.4% don't Report to the supervisors.

This indicates that although there is no system for writing reports of medical errors, during their occurrence, students inform the supervisor, provide appropriate treatment for the patient, and manage any complications that occurred to maintain the best level of patient safety in the clinics.

**- Student rating about patient safety**

In general, there 89.6% percent report that the patient safety assessment is excellent and very good, and considered acceptable. This is probably because the patient is being treated, and if a medical error occurs, its managed and appropriate treatment is provided, even if the patient had been transferred from one department to another and call the specialist to maintain the patient's maximum safety and not harm him even if it is not a unified system between clinics to write medical errors.

As shown in table (4.15) the overall average positive percent score was 60.44%. Average positive response percentages to individual items ranged from 5.21 to 90%. Teamwork within the dental clinic had the highest average positive percentage 87.34%. And the organizational learning domain had the lowest score (25.74%).

It is essential to increase overall performance and service quality to strengthen patient safety. The focus of all the domains should be on high-priority activities that require reflection and reform. To strengthen the notion of safety culture among the staff and students, the faculty must implement ongoing training sessions on patient safety, find a system for writing medical errors, teaching students about how to write them, teach the students about sterilization procedures, find effective communication between the staff and students and creating study materials within the study plan for students related to patient safety and preservation.

**Table (4.14a): Survey composites and items average percentages of positive scores**

<b>Composites and survey items</b>	<b>Average % of positive response</b>
<b>Team work within unit (Cronbach's <math>\alpha = 0.940</math>)</b>	<b>87.34%</b>
In this unit, we work together as an effective team	90%
During busy times, staff in this unit help each other	87.67%
There is a problem with disrespectful behavior by those working in this unit.	84.36%
<b>Staffing (Cronbach's <math>\alpha = 0.911</math>)</b>	<b>47.39%</b>
In this unit, we have enough staff to handle the workload	35.07%
Staff in this unit work longer hours than is best for patient care*	35.54%
This unit relies too much on temporary, float, or PRN staff®*	47.86%
The work pace in this unit is so rushed that it negatively affects patient safety*	71.09%
<b>Organizational learning (Cronbach's <math>\alpha = 0.847</math>)</b>	<b>25.75%</b>
This unit regularly reviews work processes to determine if changes are needed to improve patient safety	63.98%
In this unit, changes to improve patient safety are evaluated to see how well they worked	5.21%
This unit lets the same patient safety problems keep happening	8.05%
<b>Response to error (Cronbach's <math>\alpha = 0.90</math>)</b>	<b>53.19%</b>
In this unit, staff feel like their mistakes are held against them ®	61.13%
When an event is reported in this unit, it feels like the person is being written up, not the problem. ®	47.86%
When staff make errors, this unit focuses on learning rather than blaming individuals	58.76%
In this unit, there is a lack of support for staff involved in patient safety errors ®	45.02%
<b>supervisor (Cronbach's <math>\alpha = 0.854</math>)</b>	<b>67.45%</b>
My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety	62.08%
My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts	51.65%
My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention	88.62%



**Table (4.14b): Survey composites and items average percentages of positive scores**

<b>Composites and survey items</b>	<b>Average % of positive response</b>
<b>Communication about error (Cronbach's <math>\alpha = 0.770</math>)</b>	<b>69.03%</b>
We are informed about errors that happen in this unit	70.14%
When errors happen in this unit, we discuss ways to prevent them from happening again	71.56%
In this unit, we are informed about changes that are made based on event reports	65.40%
<b>Communication openness (Cronbach's <math>\alpha = 0.940</math>)</b>	<b>47.15%</b>
In this unit, staff speak up if they see something that may negatively affect patient care	41.23%
When staff in this unit see someone with more authority doing something unsafe for patients, they speak up	40.75%
When staff in this unit speak up, those with more authority are open to their patient safety concerns	70.14%
In this unit, staff are afraid to ask questions when something does not seem right	36.49%
<b>Reporting patient safety error (Cronbach's <math>\alpha = 0.723</math>)</b>	<b>71.1%</b>
When a mistake is caught and corrected before reaching the patient, how often is this reported?	88.6%
When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported?	53.6%
<b>Clinical management support for patient safety (Cronbach's <math>\alpha = 0.741</math>)</b>	<b>68.4%</b>
The actions of clinical management show that patient safety is a top priority	88.62%
Clinical management provides adequate resources to improve patient safety	53.55%
Clinical management seems interested in patient safety only after an adverse event happens*	63.03%
<b>Handoffs and information exchange (Cronbach's <math>\alpha = 0.841</math>)</b>	<b>53.7%</b>
When transferring patients from one unit to another, important information is often left out	51.65%
During shift changes, important patient care information is often left out	61.61%
During shift changes, there is adequate time to exchange all key patient care information	47.86%
<b>Overall score of positive response</b>	<b>59.05%</b>

## 4.2 Inferential analysis:

### 4.2.1 The relation between patient safety total score and the student's characteristics:

**Table (4.15): Differences in patient safety total scores in reference to the students categories gender, education level and governorates**

Variables	Groups	How would you rate your unit/work area on patient safety?				Statistical Analysis	
		Poor (n=2)	Good (n=20)	Very Good (n=110)	Excellent (n=79)	$\chi^2$	p-value
<b>Gender</b>	Male	1 (50)	5 (25)	23 (20.9)	15 (19)	1.405	0.704
	Female	1 (50)	15 (75)	87 (79.1)	64 (81)		
<b>Education level</b>	Fifth level	0 (0)	7 (35)	45 (40.9)	33 (41.8)	1.672	0.643
	Fourth level	2 (100)	13 (65)	65 (59.1)	46 (58.2)		
<b>Governorate</b>	North	1 (50)	4 (20)	16 (14.5)	9 (11.4)	6.019	0.915
	Gaza	1 (50)	7 (35)	58 (52.7)	40 (50.6)		
	Middle zone	0 (0)	4 (20)	15 (13.6)	12 (15.2)		
	Khan		2 (10)	12 (10.9)	10 (12.7)		
	Younis	0 (0)					
	Rafah	0 (0)	3 (15)	9 (8.2)	8 (10.1)		

\*  $P < 0.05$ : significant,  $P \geq 0.05$ : not significant, **n**: number;  $\chi^2$ : Chi-square test.

Table (4.16) presents the relationship between participants' characteristics and the rating of their unit/work area on patient safety. The table includes variables such as Gender, Education Level, and Governorate, along with their respective groups and the frequency of ratings.

For the variable "Gender," participants were categorized as Male or Female. Among the participants who rated patient safety in their unit as poor, 50% were male, while the other 50% were female. In the Good group, 25% were male and 75% were female.

In the Very Good group, 20.9% were male, and 79.1% were female. In the Excellent group, 19% were male, and 81% were female. The chi-square test indicated no significant association between gender and the rating of the unit/work area on patient safety ( $\chi^2 = 1.405$ ,  $p = 0.704$ ).

Regarding "Education level," participants were classified into Fifth level and Fourth level. In the Poor group, all participants had a Fourth-level education. In the Good group, 35% had

a Fifth-level education, and 65% had a Fourth-level education. In the Very Good group, 40.9% had a Fifth-level education, and 59.1% had a Fourth-level education. In the Excellent group, 41.8% had a Fifth-level education, and 58.2% had a Fourth-level education.

The chi-square test showed no significant association between education level and the rating of the unit/work area on patient safety ( $\chi^2 = 1.672$ ,  $p = 0.643$ ).

Regarding "Governorate," participants were categorized into different areas: North, Gaza, Middle Zone, Khan Younis, and Rafah. The distribution of ratings varied across the different governorates, but the chi-square test indicated no significant association between governorate and the rating of the unit/work area on patient safety ( $\chi^2 = 6.019$ ,  $p = 0.915$ ).

In summary, the analysis revealed no significant associations between gender, education level, governorate, and the rating of the unit/work area on patient safety.

#### 4.2.2 The relation between participants' characteristics and Number of patient safety events have you reported in the past 12 months:

**Table (4.16): The relation between participants' characteristics and Number of patient safety events have you reported in the past 12 months.**

Variables	Groups	Number of patient safety events have you reported in the past 12 months			Statistical Analysis	
		None (n=148)	1 to 2 (n=54)	3 to 5 (n=9)	$\chi^2$	p-value
Gender	Male	21 (14.2)	21 (38.9)	2 (22.2)	14.635	0.001*
	Female	127 (85.8)	33 (61.1)	7 (77.8)		
Education level	Fifth level	64 (43.2)	18 (33.3)	3 (33.3)	1.804	0.406
	Fourth level	84 (56.8)	36 (66.7)	6 (66.7)		
Governorate	North	18 (12.2)	10 (18.5)	2 (22.2)	5.301	0.725
	Gaza	74 (50)	27 (50)	5 (55.6)		
	Middle zone	22 (14.9)	9 (16.7)	0 (0)		
	Khan Younis	20 (13.5)	3 (5.6)	1 (11.1)		
	Rafah	14 (9.5)	5 (9.3)	1 (11.1)		

\*  $P < 0.05$ : significant,  $P \geq 0.05$ : not significant, **n**: number;  $\chi^2$ : Chi-square test.

Table (4.17) presents the relationship between participants' characteristics and the number of patient safety events they reported in the past 12 months. The table includes variables such as Gender, Education Level, and Governorate, along with their respective groups and the frequency of reported patient safety events.

For the variable "Gender," Among the participants who reported none of the patient safety events, 14.2% were male, while 85.8% were female. In the group reporting 1 to 2 events, 38.9% were male and 61.1% were female. In the group reporting 3 to 5 events, 22.2% were male and 77.8% were female. The chi-square test indicated a significant association between gender and the number of reported events ( $\chi^2 = 14.635$ ,  $p = 0.001^*$ ).

Regarding "Education level," participants were classified into Fifth level and Fourth level. In the group reporting no events, 43.2% had a Fifth-level education, while 56.8% had a Fourth-level education. In the group reporting 1 to 2 events, 33.3% had a Fifth-level education, and 66.7% had a Fourth-level education. In the group reporting 3 to 5 events, 33.3% had a Fifth-level education, and 66.7% had a Fourth-level education. The chi-square test showed no significant association between education level and the number of reported events ( $\chi^2 = 1.804$ ,  $p = 0.406$ ).

Regarding "Governorate," participants were categorized into different areas: North, Gaza, Middle Zone, Khan Younis, and Rafah. The distribution of reported events varied across the different governorates, but the chi-square test indicated no significant association between the governorate and the number of reported events ( $\chi^2 = 5.301$ ,  $p = 0.725$ ).

In brief, the analysis revealed a significant association between gender and the number of reported patient safety events, while no significant associations were found for education level and governorate.

### 4.2.3 The relationship between gender and patient safety studied domain

**Table (4.17): The relationship between gender and patient safety studied domain**

Domain	Gender	N	Mean	t	p-value
Team work	Male	44	3.27	-1.271	0.205
	Female	167	3.34		
Staffing	Male	44	2.76	0.599	0.550
	Female	167	2.71		
Organizational learning	Male	44	3.20	1.431	0.154
	Female	167	3.09		
Response to error	Male	44	2.91	0.585	0.559
	Female	167	2.86		
Supervisor	Male	44	3.44	-0.050	0.960
	Female	167	3.44		
Communication about error	Male	44	3.67	0.240	0.810
	Female	167	3.64		
Communication about openness	Male	44	3.27	0.226	0.821
	Female	167	3.25		
Reporting patient safety error	Male	44	3.06	-0.034	0.973
	Female	167	3.06		
Clinical management support for patient safety	Male	44	1.58	2.184	0.030*
	Female	167	1.48		
Handoffs and information exchange	Male	44	3.03	1.893	0.104
	Female	167	2.79		

Table (4.18) presents the means, t-values, and p-values for different domains of a survey based on gender. In terms of gender differences, there were no significant differences observed in the domains of teamwork ( $p = 0.205$ ), staffing ( $p = 0.550$ ), organizational learning ( $p = 0.154$ ), response to the error ( $p = 0.559$ ), supervisor ( $p = 0.960$ ), communication about error ( $p = 0.810$ ), communication about openness ( $p = 0.821$ ), safety error ( $p = 0.973$ ), and handoffs and information exchange ( $p = 0.104$ ).

However, there was a significant difference in the domain of Clinical management support for patient safety ( $p = 0.030$ ), with males (mean = 1.58) scoring higher than females (mean = 1.48).

#### 4.2.4 The relationship between education levels and patient safety studied domain

**Table (4.18): The relationship between education levels and patient safety studied domain**

Domain	Education levels	N	Mean	t	P-value
Team work	Fifth level	85	3.34	0.532	0.595
	Fourth level	126	3.31		
Staffing	Fifth level	85	2.72	0.037	0.971
	Fourth level	126	2.72		
Organizational learning	Fifth level	85	3.03	-2.374	0.018*
	Fourth level	126	3.17		
Response to error	Fifth level	85	2.87	-0.078	0.938
	Fourth level	126	2.87		
Supervisor	Fifth level	85	3.38	-1.789	0.075
	Fourth level	126	3.49		
Communication about error	Fifth level	85	3.62	-0.366	0.715
	Fourth level	126	3.66		
Communication about openness	Fifth level	85	3.24	-0.356	0.722
	Fourth level	126	3.27		
Reporting patient Safety error	Fifth level	85	3.05	-0.166	0.868
	Fourth level	126	3.07		
Clinical management support for patient safety	Fifth level	85	1.48	-0.693	0.489
	Fourth level	126	1.51		
Handoffs and information exchange	Fifth level	85	2.85	0.216	0.829
	Fourth level	126	2.84		

Table (4.19) shows the relationship between education levels and different domains in a study. In terms of education levels, there were no significant differences observed in the domains of teamwork ( $p = 0.595$ ), staffing ( $p = 0.971$ ), response to error ( $p = 0.938$ ), communication about error ( $p = 0.715$ ), communication about openness ( $p = 0.722$ ), reporting patient safety error ( $p = 0.868$ ), Clinical management support for patient safety ( $p = 0.489$ ), and handoffs and information exchange ( $p = 0.829$ ).

However, there was a significant difference in the domain of organizational learning ( $p = 0.018$ ), with participants in the fifth level of education (mean = 3.03) scoring lower than those in the fourth level of education (mean = 3.17).

#### 4.2.5 The relationship between Governorates and patient safety studied domain

**Table (4.19): The relationship between Governorates and studied domain**

<b>Domains</b>	<b>Governorates</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>F</b>	<b>P-value</b>
Team work	North	30	3.32	0.34	0.038	0.997
	Gaza	106	3.33	0.33		
	Middle zone	31	3.31	0.31		
	Khan Younis	24	3.31	0.28		
	Rafah	20	3.32	0.45		
Staffing	North	30	2.81	0.47	1.031	0.392
	Gaza	106	2.71	0.47		
	Middle zone	31	2.72	0.38		
	Khan Younis	24	2.57	0.39		
	Rafah	20	2.79	0.49		
Organizational learning	North	30	3.18	0.49	0.294	0.882
	Gaza	106	3.09	0.39		
	Middle zone	31	3.13	0.47		
	Khan Younis	24	3.10	0.44		
	Rafah	20	3.15	0.45		
Response to error	North	30	2.87	0.51	0.666	0.616
	Gaza	106	2.83	0.48		
	Middle zone	31	2.94	0.53		
	Khan Younis	24	2.90	0.49		
	Rafah	20	2.99	0.44		
Supervisor	North	30	3.44	0.43	0.744	0.563
	Gaza	106	3.49	0.42		
	Middle zone	31	3.40	0.43		
	Khan Younis	24	3.39	0.46		
	Rafah	20	3.33	0.56		
Communication about error	North	30	3.76	0.83	1.051	0.382
	Gaza	106	3.64	0.62		
	Middle zone	31	3.76	0.78		
	Khan Younis	24	3.46	0.69		
	Rafah	20	3.52	0.64		
Communication about openness	North	30	3.29	0.60	0.245	0.913
	Gaza	106	3.25	0.49		
	Middle zone	31	3.23	0.47		
	Khan Younis	24	3.32	0.43		
	Rafah	20	3.20	0.25		
Safety error	North	30	3.28	1.08	2.109	0.081
	Gaza	106	3.17	1.02		
	Middle zone	31	2.97	0.97		
	Khan Younis	24	2.83	1.20		
	Rafah	20	2.58	0.88		
Patient safety	North	30	1.53	0.33	0.658	0.622
	Gaza	106	1.48	0.28		
	Middle zone	31	1.48	0.27		
	Khan Younis	24	1.49	0.34		
	Rafah	20	1.58	0.24		
Handoffs and information exchange	North	30	2.87	0.45	0.100	0.982
	Gaza	106	2.85	0.53		
	Middle zone	31	2.83	0.45		
	Khan Younis	24	2.79	0.52		
	Rafah	20	2.87	0.45		

Table (4.20) presents data on various domains and their relationship with different governorates. The findings indicate that, overall, there were no significant differences in the mean scores for most of the domains across different governorates.

This suggests a consistent perception and similar attitudes towards teamwork, staffing, organizational learning, response to error, supervisor relationships, communication about error, communication about openness, patient safety, and handoffs and information exchange ( $P>0.05$ ).

### **4.3 Finding derived from the qualitative part:**

The section presents the focus group and key informative interview data analysis, which are based on the findings of the 12 key informative interviews with teacher assistants and the focus group interviews conducted with 48 dental students.

#### **4.3.1 Qualitative data analysis:**

All interviews were transcribed and analyzed using the Framework method. Systematic sifting, indexing, and charting of the transcribed data were conducted according to key issues and themes. An Excel spreadsheet was used to record the transcribed data of each subject in one column.

The two interviewers viewed these independently after which they extracted the important comments into a second column, frequently on the same spreadsheet. Before deciding to index them in a third column to create a thematic framework, the two interviewers agreed to discuss the key observations drawn from each transcript.

#### **4.3.2 The Participants' Characteristics:**

The 48 dental students grouped in 6 focus groups and 12 key informative interviews with teacher assistants who participated in the qualitative part were diverse in terms of educational level, and gender. Characteristics of the qualitative study participants are presented in Table (4.21).



**Table (4.20): Explain characteristic of participants of qualitative study:**

Participants	Females	males	Education levels	
Dental students	30%	70%	60% fifth grade	40% fourth grade
Teacher assistant	58%	42%	25% master degree	75% GP

**Table (4.21): Themes of qualitative study**

Themes	codes	Supporting quotes
Meaning of patient safety	No harm, good diagnosis, perfect infection control, ideal treatment	"The patient is discharged without harm" "To prevent patients from leaving the facility with chronic illnesses like hepatitis, extensive cleaning is required". " Patient satisfaction and pain relief"
The importance of patient safety	Patient satisfaction -treatment with high quality-improve the students' performances	"Leaving the patient smiling is a great benefit" "The return of the patient with his relatives to receive treatment due to his satisfaction with the services provided" "Following our patient safety protocol makes the treatment perfect and increases my performance"
Management role in patient safety	Increase Staff availability, enhance skill and knowledge, communication with all the level, continuous training	"The college administration should send the staff abroad in intensive courses to transfer advanced expertise to us" " You should increase the number of staff in the clinics so that there is no pressure on the student, the supervisor and the patient, especially in clinics where more complications can occur"
Weakness area in patient safety	Reporting system, communication with clinics, insufficient staff, patient's management, Equipping the clinic with the latest equipment and materials, temporary staff, Patient registration database	" I don't know the basics and I don't know how to write a medical malpractice report" " The lack of a fixed staff and constantly changing it affects our performance because the experience of the new crew is less" "Each clinic is independent and does not accept cases from other departments, resulting in poor coordination between facilities and affecting patient care planning". "Our clinics are not equipped with emergency facilities and supplies in case of complications at either clinic, which in turn impacts patient safety"
Strongest area in patient safety	Teamwork, communication between staff and students, supervision role	"The staff at the clinic is like one family" "Correspondence between the staff and understudies is perfect, and this makes the understudy treat the patient in a climate of regard and solace "
Improvement to prevent patient incident	reporting system, health information systems, fixed staff, Standardized protocol	"there must be a database of patients so that their data is not lost and complete their treatment"

	between clinics, patient privacy	"finding an electronic framework to record clinical mistakes and scatter the outcomes to the other divisions " " In order to safeguard patient privacy and ensure student comfort during treatment, the managers must construct barriers between clinics ."
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In our qualitative study, the participants gave their perceptions and concepts about patient safety and what it means to them when they hear it. And explained the role of the management in the College of Dentistry to maintain patient safety, areas that suffer from weakness and areas that are strong in relation to patient safety, and interventions that can be introduced in clinics to work to improve the level of Patient safety.

#### - **Meaning of patient safety in dentistry:**

When all the participants were asked about clarifying the concept of patient safety, the common word was no harm or disease.

One of the fourth-level students said, *"To leave as the patient entered at least without causing him harm,"* and another student say, *"that the sterilization applied is ideal and at the highest level."*

One of the teacher's assistants explained, *" Provide a treatment without harm, with the appropriate diagnosis."*

From this, the researcher can conclude that the concept of patient safety refers to the correct and appropriate diagnosis of the patient and providing the ideal treatment under high sterilization without causing any harm to the patient.

#### **The importance of patient safety:**

in the context of dental clinics, patient safety importance to reduce or avoid preventable harm to the patient during treatment, and to keep patient health risks as low as possible by following the safety policy.

Patient safety initiatives involve minimizing physical, mental, or emotional harm, as well as safeguarding private patient information. These initiatives may include protocols designed to prevent accidents, neglect, or misdiagnoses that might inadvertently harm the patient

From the study conducted by the researcher, the students and the teacher's assistant stressed the importance of patient safety and reducing medical errors by following the instructions and developing scientific and communication skills among students and teachers.

As one of the fifth level students said: *"The importance of the patient's safety is due to his satisfaction with his presence in the college and with the treatment."*

A student in the fourth level added: *"The importance of following the patient safety protocol is due to raising the quality of services provided."*

As one of the teacher's assistant added: *"Our interest in the teachings of patient safety is not only due to the benefit of patients, but also to students by raising their scientific and academic levels."*

**- Management role in patient safety:**

The students and teaching assistants explained that the management plays a key role in maintaining the level of patient safety at its highest levels in terms of providing the clinics with adequate and highly qualified staff and trainers.

One of the students said: *"The problem is that there is not enough staff in some clinics that face complications,"* and another student added from the fifth level: *"This in turn makes patients wait and students under severe pressure, which insists on their performance in progress the treatment for the patients"*

As one of the teacher's assistants said, *" The management must provide us with continuous training courses to raise our level of performance and skills."*

As one of the fifth-level students said, *"The management needs to hear from us and communicate with all levels in order to know the strengths and weaknesses."* A fifth-

level student added to his colleague, *"The most important thing is to apply the suggestions on the ground."*

It is clear to us from the previous the importance of the role of the management in the college to communicate with the students and staff to hear from them the aspects that must be worked on and the problems and suggestions they face and to communicate with the university management to work on implementing the suggestions and addressing the matter on the ground. The university management must also provide the clinics with a larger, highly qualified staff.

This entails creating a system that makes it simple to report unsafe behavior and have it remedied without harassing the individual who reported it. Additionally, it entails giving personnel regular training and retraining sessions.

**- Weakness and strongest area in patient safety:**

Through this study, it is clear that there are weak aspects in dental clinics that insist on patient safety, and work must be done to develop them, such as creating a registration database for patients, recording patient data, and follow-up is better and complete treatment for patients between clinics, and maintain patient safety and satisfaction.

One of the fifth level students said: *"Recording patients' data is on papers within the same department, and they are constantly disposed of"*

Another student added, *" The treatments provided to the patient inside the college, and follow-up is difficult."*

One of the teaching assistants added, *"there is a need for electronic health information system that forms our database so that the treatment provided is better and the follow-up of the patient is better and completing his treatment is easier."*

Another teacher's assistant added, *"Because the dental school need a database to continue the research ."*

The researcher also emphasized the need for a stable academic staff with wonderful practical, scientific and communication experiences in order to maintain a high level of skill in the treatment provided and to maintain the safety of the patient.

Here, one of the teaching assistants added, "*there is no guarantee our survival as the staff on temporary contracts, and this in turn affects our level of performance.*"

As it became clear to us, through the qualitative study, that there is no system for writing reports of medical errors, where a system must be found in order to develop ways to prevent them and not recur, and the clinic must be equipped with the latest devices and technologies so that the patient is dealt with if any complications occur to him while receiving treatment.

In terms of the strong aspects of the college that must be kept at a high level, teamwork and work under pressure.

The college staff in one clinic or one department is like one family. There is cooperation between the staff, exchanging ideas and opinions, and solving problems.

As one of the students in the fifth level said, "*What is important the treatment is provided to the patient should be at the highest level without complications, and the patient should be satisfied with the cooperation between all the clinic members.*"

And one of the teacher's assistants added, "*The importance must be in the one clinic is to continue the treatment process for the patient in our department at the highest level, and it does not matter whether the current case is under my supervision or not, everyone cooperates to help the student complete his cases.*"

Effective communication in the clinics between the staff and the patients is considered within an acceptable level, as the staff hears from the students and from each other, and this in turn works to exchange ideas, develop performance and solve problems.

By communicating our thoughts to the university management. The researcher emphasizes the importance of communication in raising students' performance, performing the educational process for them, and the therapeutic process provided to patients.

It also became clear to us that the role of supervision in our clinics is at a high level, as they maintain student education, raise their performance, communicate with students and patients, and effectively and continuously communicate with the college management in order to raise the level and performance of students, obtain patient satisfaction, and inform the college administration of all aspects of weakness and strength so that it continues to develop.

And enhancing it, as one of the students added: *"Our supervisors in the clinic are at the forefront to deal with us, patients and their complaints, and convey our ideas to the deanship of the college."*

- **Improvement required to prevent patient safety incidents:**

Through our qualitative studies and our discussion with the students and staff, the common suggestions that bridge our weaknesses and work to strengthen them. One of the most important of them, and almost everyone is unanimous on them, is to create an electronic health information system, as one of the fifth-level students added: *"the students want a data set to give an incorporated treatment to the patient, and its follow-up is better."*

Another student in the fourth level said: *"the patients' data must preserve with us so students communicate with them later, especially since sometimes face a shortage of patients, and this makes it easier for us."*

One of the teacher's assistants added: *"Creating a healthy system that allows us to communicate between clinics."*

And to create a unified system between the clinics, as each department works on its own and there is no communication between the departments.

As it turned out previously, creating a preserved database of patients works to assist students in continuing treatment for patients and providing cases for them and for patients in providing integrated treatment and following them up in the occurrence of complications or medical errors. The database helps us to do continuous research to raise the level and performance of the staff and fill gaps and strengthen them.

One of the students also added that: *“there is a need to protect the patient's privacy by protecting their personal and medical data while providing treatment.*

As one of the fifth-level students said: *"Many female cases refuse treatment because there is no barriers between clinics."*

And there is a need to find a stable academic staff in the college and to find unified protocols in one clinic and between clinics to reach standardized treatment steps and manage complications, and this facilitates the educational process for students and its continuous advancement.

As one of the teacher assistants added: *“There is no unified system between clinics Everyone can follow-up it, and this sometimes hinders and makes it difficult for us to work and deal with students.”*

Another teacher’s assistant added, *“Because the staff differs for each class in the clinics, and this in turn makes it difficult for us to find a unified system applied in the clinics.”*

## **Chapter Five**

### **Conclusions and Recommendations**

#### **5.1 Conclusion**

In dental school promotion of patient safety is an ethical obligation as dental students handle dangerous drug and advanced technical appliance so commitment to patient safety protocols minimize danger inherent treatment and avoid the occurrence of any possible complication.

This study is the first study asses perception of patient safety in dental schools in Gaza, where the researcher used mixed qualitative and quantitative methods to obtain information in depth.

Teamwork in dental clinics received the highest score of 87.34%, This confirms the importance of existence efficient and effective teamwork to provide treatment with high quality and no harm but organization learning the lowest mean score 53.1% and this emphasis on existence of providing the framework for complex interconnected dynamic systems where all operational units have to learn and execute their assigned functions to collectively improve safe patient care .Followed by writing reporting patient safety events with score mean 61.2%, as there a problem in the clinical departments is the lack of writing reports of medical errors, and it turns out here that the faculty's managers must focus on reforming this aspect, as everyone in the college, students and staff, must write reports of medical errors and disseminate them in order to improve the performance of the students and the staff and not to fall in this mistake another time.

Efforts to promote patient safety are likely to be met with skepticism and disrespect if there is not at least some familiarity, if not consensus, with the general context of patient safety. Within the context of a positive safety culture in dental schools, it is necessary to cultivate attitudes toward patient safety. The creation of a culture of safety and patient safety promotion training must be supported by ethics and professionalism.



## **5.2 Recommendations**

1. There is a need to introduce educational material within the study plan for students, especially fourth and fifth-level students, related to patient safety in clinics and how to maintain and improve it.
2. The communication openness has a low score of 65.15%, it can be improved and raised by making all channels of communication available on all administrative levels in the college.
3. Introducing a computerized information system in the college to record patients' data and the treatment operations so that it is easy to refer to this information at any time and in order to ensure the safety of the patient and ensure that he receives appropriate treatment without complications.
4. Hand-off and transition got a low score of 68.07%, so dental clinic management must support a program to facilitate information and exchange it between the same department and the different departments to complete the appropriate treatment for the patient.
5. There is no adequate cooperation between departments in dental clinics, where each department deals with patients independently. Therefore, researcher emphasize finding a cooperative system between departments in a comprehensive and integrated manner, so that the best treatment is provided to the patient.
6. There is a need to assess the perception of patients and students toward patient safety on a regular and continuous basis to make necessary improvements.
7. Apply a system for writing reports of medical errors and disseminate them so that maximum benefit is made and learning from mistakes, as writing reports dimension had score mean 61.2%.
8. Direction to decision makers at the university to support an educational environment in clinics to make patient safety a top priority, and constantly assess and improve patient safety problems, to ensure that medical errors that harm patient safety are not repeated, as the learning organization has the lowest average score of 53.14%.

## **5.3 Research recommendations:**

1. Enhancing the study many times to identify the impact of the development in the dimension of patient safety and the interventions that have been carried out.
2. Conducting a study on patients' perception of patient safety in dental clinics and the services provided to them.

3. Conduct separate studies on the weakest dimension of patient safety to make the necessary interventions and strengthen them.

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## Annexes

### Annex (1): SOPS Hospital Survey 2.0: Items and Composite Measures:

#### SOPS Hospital Survey 2.0: Items and Composite Measures

In this document, the items in the SOPS Hospital Survey 2.0 are grouped according to the safety culture composite measures they are intended to assess. The item's survey location is shown to the left of each item. Negatively worded items are indicated. Reliability statistics based on the pilot test data from 25 hospitals and 4,345 hospital staff are provided for the composite measures.

##### **1. Teamwork**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- A1. In this unit, we work together as an effective team.
- A8. During busy times, staff in this unit help each other.
- A9. There is a problem with disrespectful behavior by those working in this unit. (negatively worded)

Reliability of this composite measure—Cronbach's alpha (3 items) = .76

##### **2. Staffing and Work Pace**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- A2. In this unit, we have enough staff to handle the workload.
- A3. Staff in this unit work longer hours than is best for patient care. (negatively worded)
- A5. This unit relies too much on temporary, float, or PRN staff. (negatively worded)
- A11. The work pace in this unit is so rushed that it negatively affects patient safety. (negatively worded)

Reliability of this composite measure—Cronbach's alpha (4 items) = .67

##### **3. Organizational Learning—Continuous Improvement**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- A4. This unit regularly reviews work processes to determine if changes are needed to improve patient safety.
- A12. In this unit, changes to improve patient safety are evaluated to see how well they worked.
- A14. This unit lets the same patient safety problems keep happening. (negatively worded)

Reliability of this composite measure—Cronbach's alpha (3 items) = .76

##### **4. Response to Error**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- A6. In this unit, staff feel like their mistakes are held against them. (negatively worded)
- A7. When an event is reported in this unit, it feels like the person is being written up, not the problem. (negatively worded)
- A10. When staff make errors, this unit focuses on learning rather than blaming individuals.
- A13. In this unit, there is a lack of support for staff involved in patient safety errors. (negatively worded)

Reliability of this composite measure—Cronbach's alpha (4 items) = .83

**Note:** Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composite measure scores.

## **5. Supervisor, Manager, or Clinical Leader Support for Patient Safety**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- B1. My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety.
- B2. My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts. (negatively worded)
- B3. My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention.

Reliability of this composite measure—Cronbach's alpha (3 items) = .77

## **6. Communication About Error**

(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)

- C1. We are informed about errors that happen in this unit.
- C2. When errors happen in this unit, we discuss ways to prevent them from happening again.
- C3. In this unit, we are informed about changes that are made based on event reports.

Reliability of this composite measure—Cronbach's alpha (3 items) = .89

## **7. Communication Openness**

(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)

- C4. In this unit, staff speak up if they see something that may negatively affect patient care.
- C5. When staff in this unit see someone with more authority doing something unsafe for patients, they speak up.
- C6. When staff in this unit speak up, those with more authority are open to their patient safety concerns.
- C7. In this unit, staff are afraid to ask questions when something does not seem right. (negatively worded)

Reliability of this composite measure—Cronbach's alpha (4 items) = .83

## **8. Reporting Patient Safety Events**

(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)

- D1. When a mistake is caught and corrected before reaching the patient, how often is this reported?
- D2. When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported?

Reliability of this composite measure—Cronbach's alpha (2 items) = .75

## **9. Hospital Management Support for Patient Safety**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- F1. The actions of hospital management show that patient safety is a top priority.
- F2. Hospital management provides adequate resources to improve patient safety.
- F3. Hospital management seems interested in patient safety only after an adverse event happens. (negatively worded)

Reliability of this composite measure—Cronbach's alpha (3 items) = .77

**Note:** Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composite measure scores.

#### **10. Handoffs and Information Exchange**

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)

- F4. When transferring patients from one unit to another, important information is often left out. (negatively worded)
- F5. During shift changes, important patient care information is often left out. (negatively worded)
- F6. During shift changes, there is adequate time to exchange all key patient care information.

Reliability of this composite measure—Cronbach's alpha (3 items) = .72

#### **Number of Events Reported**

(None, 1 to 2, 3 to 5, 6 to 10, 11 or more)

- D3. In the past 12 months, how many patient safety events have you reported?

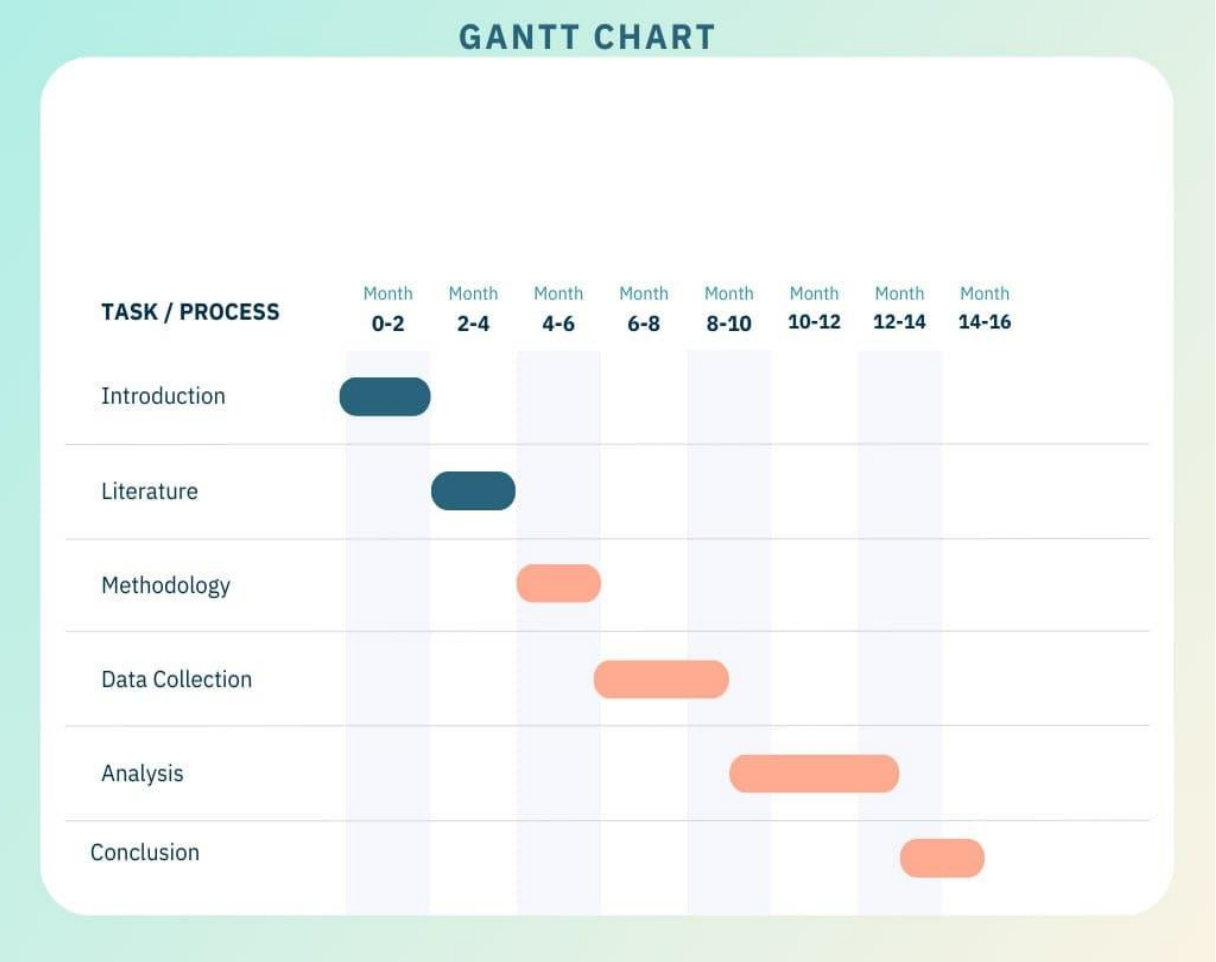
#### **Patient Safety Rating**

(Poor, Fair, Good, Very Good, Excellent)

- E1. How would you rate your unit/work area on patient safety?

**Note:** Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composite measure scores.

**Annex (2): Gantt chart**





### Annex (3): Ethical approval: Helsinki Committee



المجلس الفلسطيني للبحث الصحي  
Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار  
Developing the Palestinian health system through institutionalizing the use of information in decision making

## المجلس الفلسطيني للبحث الصحي

## Palestinian Health Research Council

### Helsinki Committee

For Ethical Approval

Date: 07/02/2022

Number: PHRC/HC/1047/22

Name: Ayah Mohsen

الاسم:

We would like to inform you that the committee had discussed the proposal of your study about:

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:

Assessment of Patient Safety Strategies at Dental Clinic-Al-Azhar University.

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/1047/22 in its meeting on 07/02/2022

وقد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member

Member

Chairman

Genral Conditions:-

1. Valid for 2 years from the date of approval.
2. It is necessary to notify the committee of any change in the approved study protocol.
3. The committee appreciates receiving a copy of your final research when completed.

Specific Conditions:-

E-Mail: pal.phrc@gmail.com

Gaza - Palestine

غزة - فلسطين

شارع النصر - مفترق العيون

**Annex (4): Dental Clinic Survey on patient safety culture:**

Peace, mercy and blessings of God. and yet,,

I am the researcher\ Aya Rafiq Abdelrahman Mohsen, I am conducting this research study to fulfill the requirement for the master's degree in policies and health management, track quality, and patient safety in Public Health College at Al-Quds University. As the study entitled "**Perception of Patient Safety at Dental Clinics in Al-Azhar University in Gaza Strip.**"

Therefore, the researcher puts in your hands the attached survey, we request you to read it and mark (✓) in front of the appropriate answer paragraph, and your participation in this study is voluntary, with an emphasis on the confidentiality of your data and your personality, and that it will not be used except for scientific research purposes only.

Thank you for your cooperation in the service of the scientific process.

Yours sincerely

Give consent  
-----

Researcher:  
Aya Rafiq Abdelrahman Mohsen

# Hospital Survey on Patient Safety (Version 2.0)

## Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10-15 minutes to complete. If a question does not apply to you or your hospital or you don't know the answer, please select "Does Not Apply or Don't Know."

- **"Patient safety"** is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of healthcare delivery.
- A **"patient safety event"** is defined as any type of healthcare-related error, mistake, or incident, regardless of whether or not it results in patient harm.

## Your Staff Position

### 1. What is your position in this hospital?

Select ONE answer.

#### Nursing

- ☐1 Advanced Practice Nurse (NP, CRNA, CNS, CNM)
- ☐2 Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)
- ☐3 Patient Care Aide, Hospital Aide, Nursing Assistant
- ☐4 Registered Nurse (RN)

#### Medical

- ☐5 Physician Assistant
- ☐6 Resident, Intern
- ☐7 Physician, Attending, Hospitalist

#### Other Clinical Position

- ☐8 Dietitian
- ☐9 Pharmacist, Pharmacy Technician
- ☐10 Physical, Occupational, or Speech Therapist
- ☐11 Psychologist
- ☐12 Respiratory Therapist
- ☐13 Social Worker
- ☐14 Technologist, Technician (e.g., EKG, Lab, Radiology)

#### Supervisor, Manager, Clinical Leader, Senior Leader

- ☐15 Supervisor, Manager, Department Manager, Clinical Leader, Administrator, Director
- ☐16 Senior Leader, Executive, C-Suite

#### Support

- ☐17 Facilities
- ☐18 Food Services
- ☐19 Housekeeping, Environmental Services
- ☐20 Information Technology, Health Information Services, Clinical Informatics
- ☐21 Security
- ☐22 Transporter
- ☐23 Unit Clerk, Secretary, Receptionist, Office Staff

#### Other

- ☐24 Other, please specify:

### Your Unit/Work Area

2. Think of your "unit" as the work area, department, or clinical area of the hospital where you spend most of your work time. What is your primary unit or work area in this hospital?

Select ONE answer.

**Multiple Units, No specific unit**

- ☐1 Many different hospital units,  
No specific unit

**Medical/Surgical Units**

- ☐2 Combined Medical/Surgical  
Unit  
☐3 Medical Unit (Non-Surgical)  
☐4 Surgical Unit

**Patient Care Units**

- ☐5 Cardiology  
☐6 Emergency Department,  
Observation, Short Stay  
☐7 Gastroenterology  
☐8 ICU (all adult types)  
☐9 Labor & Delivery, Obstetrics  
& Gynecology  
☐10 Oncology, Hematology  
☐11 Pediatrics (including NICU,  
PICU)  
☐12 Psychiatry, Behavioral  
Health  
☐13 Pulmonology  
☐14 Rehabilitation, Physical  
Medicine  
☐15 Telemetry

**Surgical Services**

- ☐16 Anesthesiology  
☐17 Endoscopy, Colonoscopy  
☐18 Pre Op, Operating  
Room/Suite, PACU/Post Op,  
Peri Op

**Clinical Services**

- ☐19 Pathology, Lab  
☐20 Pharmacy  
☐21 Radiology, Imaging  
☐22 Respiratory Therapy  
☐23 Social Services, Case  
Management, Discharge  
Planning

**Administration/Management**

- ☐24 Administration, Management  
☐25 Financial Services, Billing  
☐26 Human Resources, Training  
☐27 Information Technology,  
Health Information  
Management, Clinical  
Informatics  
☐28 Quality, Risk Management,  
Patient Safety

**Support Services**

- ☐29 Admitting/Registration  
☐30 Food Services, Dietary  
☐31 Housekeeping,  
Environmental Services,  
Facilities  
☐32 Security Services  
☐33 Transport

**Other**

- ☐34 Other, please specify:



### SECTION A: Your Unit/Work Area

How much do you agree or disagree with the following statements about your unit/work area?

Think about your unit/work area:	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. In this unit, we work together as an effective team.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
2. In this unit, we have enough staff to handle the workload .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
3. Staff in this unit work longer hours than is best for patient care .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
4. This unit regularly reviews work processes to determine if changes are needed to improve patient safety .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
5. This unit relies too much on temporary, float, or PRN staff.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
6. In this unit, staff feel like their mistakes are held against them .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
7. When an event is reported in this unit, it feels like the person is being written up, not the problem.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
8. During busy times, staff in this unit help each other .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
9. There is a problem with disrespectful behavior by those working in this unit .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
10. When staff make errors, this unit focuses on learning rather than blaming individuals.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
11. The work pace in this unit is so rushed that it negatively affects patient safety .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
12. In this unit, changes to improve patient safety are evaluated to see how well they worked .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
13. In this unit, there is a lack of support for staff involved in patient safety errors .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
14. This unit lets the same patient safety problems keep happening .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9

## SECTION B: Your Supervisor, Manager, or Clinical Leader

How much do you agree or disagree with the following statements about your immediate supervisor, manager, or clinical leader?

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
2. My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
3. My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9

## SECTION C: Communication

How often do the following things happen in your unit/work area?

Think about your unit/work area:	Never ▼	Rarely ▼	Some- times ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
1. We are informed about errors that happen in this unit .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
2. When errors happen in this unit, we discuss ways to prevent them from happening again ..	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
3. In this unit, we are informed about changes that are made based on event reports .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
4. In this unit, staff speak up if they see something that may negatively affect patient care .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
5. When staff in this unit see someone with more authority doing something unsafe for patients, they speak up .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
6. When staff in this unit speak up, those with more authority are open to their patient safety concerns .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
7. In this unit, staff are afraid to ask questions when something does not seem right .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9

### SECTION D: Reporting Patient Safety Events

Think about your unit/work area:	Never ▼	Rarely ▼	Sometimes ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
1. When a mistake is <u>caught and corrected</u> before reaching the patient, how often is this reported? .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
2. When a mistake reaches the patient and <u>could</u> have harmed the patient, but did not, how often is this reported? .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
3. <u>In the past 12 months</u> , how many patient safety events have <u>you</u> reported?						
<input type="checkbox"/> a. None						
<input type="checkbox"/> b. 1 to 2						
<input type="checkbox"/> c. 3 to 5						
<input type="checkbox"/> d. 6 to 10						
<input type="checkbox"/> e. 11 or more						

### SECTION E: Patient Safety Rating

1. How would you rate your unit/work area on patient safety?

Poor ▼	Fair ▼	Good ▼	Very Good ▼	Excellent ▼
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

### SECTION F: Your Hospital

How much do you agree or disagree with the following statements about your hospital?

Think about your hospital:	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. The actions of hospital management show that patient safety is a top priority .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
2. Hospital management provides adequate resources to improve patient safety .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
3. Hospital management seems interested in patient safety only after an adverse event happens .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
4. When transferring patients from one unit to another, important information is often left out .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
5. During shift changes, important patient care information is often left out .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9
6. During shift changes, there is adequate time to exchange all key patient care information ...	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 9

**Annex (5): Dental Clinic Survey on patient safety culture (Arabic):**



**استبيان تصوير سلامة المريض في عيادات طب  
الأسنان في جامعة الأزهر**



**السلام عليكم ورحمة الله وبركاته .وبعد،،**

أنا الباحثة / آية رفيق عبد الرحمن محسن أقوم بإجراء هذا البحث كمتطلب رئيسي من متطلبات الحصول على شهادة الماجستير في برنامج السياسات والإدارة الصحية مسار الجودة وسلامة المريض في كلية الصحة العامة بجامعة القدس ابوديس ، حيث أن الدراسة والتي بعنوان: " **التصور عن سلامة المريض في عيادات طب الفم والأسنان في جامعة الأزهر في قطاع غزة**"

لذا تضع الباحثة بين أيديكم الاستبانة المرفقة المتضمنة مجموعة من الفقرات التي تمثل **التصور عن سلامة المريض في عيادات طب الفم والأسنان في جامعة الأزهر في قطاع غزة .**

راجيا منكم قراءتها والتأشير بعلامة ( √ ) أمام فقرة الإجابة الملائم لكم ، كما أن مشاركتك في هذه الدراسة طوعية ، مع التأكيد على سرية البيانات وشخصيتك وعدم استخدامها إلا لأغراض البحث العلمي فقط ، شاكرًا تعاونكم خدمةً للمسيرة العلمية.

**وتفضلوا بقبول فائق الاحترام والتقدير، ،،**

**الباحث:**

**آية رفيق عبد الرحمن محسن**

**إقرار بالموافقة**

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### تعليمات:

هذه الاستبانة تهدف لمعرفة رأيكم حول قضايا سلامة/ حماية المرضى والأخطاء الطبية وبلاغات الحوادث في عياداتكم التي تقومون بالتدرب بها في الجامعة. قد تستغرق إجابتها حوالي 15-20 دقيقة.

سلامة/حماية المرضى: هو ما يعرف بحماية المريض من الأذى ومنع وقوع اي اذى له بما في ذلك اي نتائج سلبية قد تحدث جراء تقديم الرعاية الصحية له.

حوادث سلامة المريض: أي نوع من الأخطاء، او الحوادث المتعلقة بالرعاية الصحية، بغض النظر عنما إذا تسببت بإيذاء المريض ام لا.

### الجزء الأول (A): عيادات الجامعة التي تتدرب فيها.

الجنس: .....

العمر: .....

■ الرجاء أن تختار مدى موافقتك او رفضك للجمل التالية فيما يتعلق بعيادات الجامعة الذي تتدرب بها بتحديد اجابتك في المربع.

استنادا/ بخصوص القسم الذي تعمل به.....	معارض بشدة	معارض	محايد	موافق	موافق بشدة	لا اعلم/غير مطبق
1. العاملون في هذا العيادة يعملون مع بعضهم كفريق فعال	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. عدد العاملين يكفي لاجراء العمل الموجود	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. يعمل كادر العيادة لساعات طويلة مما قد يؤثر سلبا على رعاية/ سلامة المريض	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. تراجع العيادات بانتظام لاجراءات العمل لتحديد ما إذا كانت التغييرات ضرورية لتحسين سلامة المرضى	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. تعتمد العيادة على موظفين مؤقتين وأولئك الذين يتم طلبهم حسب ضغط العمل	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. العاملين في هذه العيادة يشعرون عندما يرتكبون خطأ فانه يتم استخدامه ضدهم.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. عند الإبلاغ عن الحادث فانه يتم الإبلاغ عن الشخص أكثر من الحادث نفسه	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. عندما يكون ضغط عمل في العيادة فان العاملين يساعدون بعضهم البعض.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. هناك مشكلة في عدم احترام من يعمل في العيادات لبعضهم البعض.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. عندما يرتكب الطلبة اخطاء فان النظام في العيادة يركز على نظام التعلم من الخطأ بدلا من القاء اللوم على الافراد.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11.	نقوم بالعمل بسرعة كبيرة مما يؤثر سلبا على سلامة المريض.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	نقوم بتقييم تأثير التغييرات التي قمنا بها لتحسين سلامة المريض.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	في هذه العيادة هناك نقص في الدعم والمساندة لمرتكبين لاختفاء سلامة المريض.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	في العيادات تحدث المشاكل ذات العلاقة بسلامة المرضى بشكل متكرر.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### الجزء الثاني (B) : رئيسك المباشر / المشرف

■ ارجو ان تحدد مدى موافقتك او رفضك للجمل التالية حول المشرف أو الشخص الذي تقدم تقاريرك له ، حدد إجابتك في المربع.

رئيسك المباشر / المشرف	معارض بشدة	معارض	محايد	موافق	موافق بشدة	لا اعلم/غير مطبق
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### الجزء الثالث (C) : الاتصالات / طرق توصيل المعلومة بين الطلبة

■ كم يتكرر حدوث الأشياء التالية في عيادات الجامعة التي تتدرب بها ؟ حدد إجابتك في المربع.

استنادا/ بخصوص العيادة الذي تتدرب بها.....	لا يحدث	نادرا	احيانا	غالبا	دائما	لا اعلم/غير مطبق
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### الجزء الرابع (D) تكرار الإبلاغ عن حوادث سلامة المريض

■ كم يتكرر الإبلاغ عن الاحداث التي ترتكب فيها اخطاء في مكان عملك / قسمك ؟ حدد إجابتك في المربع

لا أعلم/غير مطبقه	دائما	غالبا	احيانا	نادرا	لا يحدث	استنادا/ بخصوص القسم الذي تعمل به.....	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	1. عندما يرتكب خطأ، ويتم ضبطه وتصحيحه قبل ايذاء المريض. هل يتم عادة الإبلاغ بذلك؟	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	2. عندما يحدث خطأ كان سيؤذي المريض ولكن لم يحدث له اذى. هل يتم عادة الإبلاغ بهذا؟	

3. خلال آخر 12 شهر من تدريبك في عيادات الجامعة كم عدد الأحداث التي أبلغت عنها أو كتبت عنها تقرير؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A/ لم ابلغ عن اي حدث B/ 2-1 بلاغ بحادثة C/ 3-5 أحداث ابلغ عنها D/ 6-10 حدث ابلغ عنه E/ 11 حدث او اكثر ابلغ عنها				

4. هل يوجد نظام إخبار عن حوادث سلامة المريض في العيادات التي يتم تدريبكم بها في الجامعة؟

.....  
.....

5. إذا وقع حوادث تخص سلامة المريض أو مشاهدتها سواء وقع منها أذى أو لم يقع او وصلت للمريض او لم تصل حتى ولكنها تعتبر خطر على سلامة المريض لمن تقوموا بإبلاغ هذه الحوادث ؟

.....

### الجزء الخامس (E): تقييم مستوى سلامة المريض

■ الرجاء أن تعطي العيادات التي تتدرب بها فغي الجامعة درجة لسلامة المرضى .حدد اجابة واحده.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A / ممتازة	B / جيدة جدا	C / مقبولة	D / ضعيفة	E / متدنية

### الجزء السادس (F): العيادات التي تتدرب بها في الجامعة

■ اشر إلى أي مدى تتفق مع المقولات التالية حول شغلك في عيادات الجامعة التي تتدرب بها.

لا أعلم/غير مطبقه	موافق بشدة	موافق	محايد	معارض	معارض بشدة	استنادا/ بخصوص تدريبك في عيادات الجامعة.....	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	1. تشير أفعال إدارة العيادة والكلية أن سلامة/حماية المرضى من أولى أولوياتها	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	2. توفر إدارة العيادة موارد كافية لتحسين سلامة المريض.	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	3. يظهر اهتمام إدارة العيادة بسلامة/حماية المرضى فقط عند وقوع اي حدث سلبي.	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	4. يتم إهمال بعض المهام عند تحويل المرضى بين اقسام العيادات في الجامعة.	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	5. تضيق المعلومات المهمة لرعاية المرضى بين الزيارات.	
<input type="checkbox"/> 9	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	6. أثناء تغييرات المناوبات يتم إعطاء وقت كافٍ لتبادل جميع المعلومات الرئيسية حول الرعاية المقدمة المرضى	

### أي ملاحظات أخرى/ تعليقاتك (I) : الجزء السابع

لا تتردد في تقديم أي تعليقات حول كيفية إنجاز المهام أو يمكن القيام بها في العيادات التي تتدرب بها في الجامعة

التي قد تؤثر على سلامة المريض.

.....

.....

.....

.....

شكرا جزيلا على مشاركتكم لإنجاز هذه الاستبان

**Annex (6): Name of experts for the assessment of qualitative questions:**

<b>Expert name</b>	<b>Degree</b>
Prof.Dr.Hazem melad	Phd in oral and maxillofacial syrgery
Dr.Rawand Abu Nahla	Master degree in periodontic
Dr.Mohammed Shamia	Master degree in oral and maxillofacial surgery
Dr.Rasha Questa	Master degree in operative dentistry
Dr.Mohammed Abu Eida	Master degree in oral and maxillofacial surgery
Dr.Osama Al Shanti	Master degree in prosthesis
Dr. Abdullah Abu Muammar	Master degree in pedodontic

## دراسة بعنوان: التصور عن سلامة المريض في عيادات طب الفم والأسنان في جامعة الأزهر في

### قطاع غزة

إعداد: آية رفيق عبد الرحمن محسن

إشراف: د. معتصم حمدان

### الملخص:

#### الخلفية والأهداف:

أدى التعقيد المتزايد لأنظمة الرعاية الصحية والزيادة الناتجة في إصابة المرضى في مؤسسات الرعاية الصحية إلى ظهور التخصص الطبي لسلامة المرضى. في مجال طب الأسنان ، كانت سلامة المرضى واحدة من الاهتمامات المتأصلة في ممارسة طب الأسنان ، لكننا وجدنا القليل من البرامج المنظمة خصيصًا لتعزيز سلامة المرضى لأن المرضى متقلون ، مما يجعل من الصعب إدراك ومتابعة أي ضار. الأحداث. من الأهمية بمكان أن يصبح تعليم سلامة المرضى خلال السنوات الأولى لتدريب طلاب البكالوريوس في طب الأسنان طبيعة ثانية ، وبالتالي ، هو المعيار العادي للرعاية.

الهدف من الدراسة هو التصور عن سلامة المرضى في عيادة الأسنان في جامعة الأزهر في قطاع غزة.

#### المنهجية:

هذه الدراسة عبارة عن تصميم مقطعي تم تثليث البيانات (الكمية والنوعية) ، واستهدفت طلاب طب الأسنان في عيادة طب الأسنان بجامعة الأزهر في قطاع غزة. تم تنفيذ الجزء الكمي من الدراسة على حوالي 126 طالبًا من المستوى الرابع وحوالي 85 طالبًا من المستوى الخامس بإجمالي 211 طالبًا. قام المشاركون بملء استبيان الدراسة الذي تم تطويره بناءً على مسح المستشفى (HSOPS) الإصدار 2.0 ، والذي تم إصداره في عام 2019. تم إجراء المسح ذاتيًا وتم جمع البيانات في الفترة ما بين مايو 2022 إلى يونيو 2022. تم إدخال البيانات و تم تحليلها باستخدام الإصدار 25 من SPSS IBM Statistics Program.

وفي الوقت نفسه ، تم إجراء الجزء النوعي من خلال 6 مناقشات جماعية مركزة حول 48 طالبًا ، و 12 مقابلة إعلامية رئيسية مع 12 مدرسًا مساعدًا. تم إجراؤهم في عيادة الأسنان بجامعة الأزهر وتم اختيارهم. تم جمع البيانات في أغسطس 2022. في مجموعات التركيز ، طرح الباحث أسئلة مفتوحة ، وقدمت نسخ مجموعة التركيز النتائج الرئيسية. بعد ذلك ، تم تصنيف الأفكار ذات الصلة وتحليل البيانات النوعية باستخدام طريقة تحليل الإطار.

#### النتائج:

تظهر نتيجة الدراسة الكمية أن معظم المشاركين كانوا من الإناث بنسبة 79.1% و 59.7% من طلاب السنة الرابعة في طب الأسنان.

قيمت الدراسة عشرة أبعاد تشكل إطارًا لثقافة سلامة المرضى في مؤسسات الرعاية الصحية. حصل مجال العمل الجماعي على أعلى متوسط درجات 87.34% .بينما كان مجال التعليم التنظيمي هو الأضعف بنسبة 53.14%.

يليه مجال الإبلاغ عن أحداث سلامة المرضى هو الأضعف بنسبة 61.2%. أظهرت النتائج أن الدرجة الإجمالية لسلامة المرضى لجميع المجالات كانت أعلى بنسبة 68.45% تقريبًا من النتائج التي تم الإبلاغ عنها سابقًا في مجال الرعاية الصحية الأولية في غزة. تراوحت أبعاد ثقافة السلامة من 60% إلى 75% من الردود الإيجابية.

كشفت النتائج عن مستوى منخفض من الإبلاغ عن الأحداث، ما يقرب من 70.1% من المشاركين أبلغوا عن أي أحداث سلبية في الـ 12 شهرًا الماضية قبل الدراسة، وأفاد 25.6% منهم ما بين 1 إلى 2 من الأحداث السلبية، و 4.3% فقط أبلغوا عن ثلاثة أو المزيد من الأحداث.

وبشأن النتائج كشفت أن 89.6% من الطلاب يعتقدون أن سلامة المرضى في عيادة الأسنان بجامعة الأزهر مقبولة، و 52.1% جيدة جدا، و 37.5% ممتازة

تظهر نتائج الدراسة النوعية أن معظم الطلاب ومساعدى التدريس المشاركين لديهم معرفة دقيقة بالعوامل التي تؤثر على سلامة المرضى ولكنهم بحاجة إلى التدريب لتحسين ممارساتهم بطرق مستمرة وسلطوا الضوء على الحاجة إلى تحسين نظام الإبلاغ عن الأخطاء، وتوفير المعدات والمواد الحديثة لعيادات الأسنان وزيادة الكادر وجعل نظام المعلومات الصحية يسجل جميع بيانات المريض والوحدة بكل العيادة في نفس الوقت. كما أكدوا على أهمية تحسين التواصل بين المريض والطلاب والمدرسين.

#### الاستنتاجات والتوصيات :

ينظر طلاب طب الأسنان ومساعدو التدريس إلى ثقافة السلامة بشكل إيجابي، وقد تم تحديد بعض مجالات السلامة لتحسينها في المستقبل. على وجه الخصوص، يعد التركيز على خلق بيئة تعليمية في عيادات الجامعة تجل سلامة المريض من أهم أولوياتها ويتم تقييم التحسينات التي تطبق لدعم سلامة المريض باستمرار والتشجيع على الإبلاغ عن الأحداث السلبية أمرًا بالغ الأهمية من أجل تحسين سلامة المرضى في عيادات طب الأسنان بجامعة الأزهر ويوصي الباحث بتضمين تعليم سلامة المرضى في البرامج الأكاديمية لطلاب طب الأسنان، وتقديم تدريب مستمر في هذا الموضوع لمساعدى التدريس. بالإضافة إلى ذلك، من الأهمية بمكان تطوير مهارات الاتصال وتعزيزها على أساس الاحترام والمصادقية والسرية بين الموظفين والطلاب من منظور واحد وبين الطلاب والمرضى من منظور آخر.