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أثر التحديات الناجمة أثناء الأزمات في أداء مقدمي الرعاية الصحية بمجمع الشفاء الطبي في قطاع غزة.

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ABSTRACT

This study aimed to assess the impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip. To achieve the study objectives, a descriptive analytical approach was employed using a cross-sectional design, which was considered most appropriate for the nature of the study. A structured questionnaire, developed by the researcher and validated for reliability and validity, was used as the primary data collection tool. The questionnaire covered key domains including shortages of medical supplies and medications, occupational stress, professional burnout, overcrowding in hospital departments, and their impact on the quality of healthcare performance. The study population comprised all healthcare providers working at Al-Shifa Medical Complex in the Gaza Strip, while the study sample consisted of 135 participants, including 45 physicians, 9 pharmacists, 61 nurses, and 20 allied health professionals. The results revealed a statistically significant negative impact of crisis-related challenges on the performance of healthcare providers. Severe shortages of essential medical supplies and medications, combined with a high influx of patients, contributed to increased levels of occupational stress and burnout among healthcare workers, which in turn reduced their ability to deliver optimal healthcare services. The findings also indicated lower levels of job satisfaction and higher psychological distress associated with repeated exposure to successive crises. The study concluded that strengthening the preparedness of the healthcare system is essential through enhancing human resource capacity, ensuring the continuous availability of medical supplies, developing effective emergency preparedness plans, and implementing psychosocial support programs for healthcare workers. These measures are crucial for improving healthcare providers' performance and ensuring the continuity and quality of healthcare services during crisis situations.

Keywords: Crises, Healthcare Challenges, Performance of Healthcare Providers, Al-Shifa Medical Complex, Gaza Strip.

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ملخص البحث

هدفت هذه الدراسة إلى تقييم أثر التحديات المرتبطة بالأزمات على أداء مقدمي الرعاية الصحية في مجمع الشفاء الطبي بقطاع غزة. ولتحقيق أهداف الدراسة، تم استخدام المنهج الوصفي التحليلي وباعتماد التصميم المقطعي (Cross-Sectional Design)لملاءمته لطبيعة الدراسة. كما اعتمدت الدراسة على الاستبانة أداة رئيسة لجمع البيانات، وقد تم تطويرها من قبل الباحث والتحقق من صدقها وثباتها ، واشتملت على محاور تتعلق بنقص الموارد الطبية، والضغط الوظيفي، والاحتراق الوظيفي، والاكتظاظ في الأقسام، وأثر ذلك على جودة الأداء الصحي. وتكوّن مجتمع الدراسة من جميع مقدمي الرعاية الصحية العاملين في مجمع الشفاء الطبي في قطاع غزة، بينما شملت عينة الدراسة (135) من العاملين، توزعت على (45) طبيباً، و(9) صيادلة، و(61) ممرضاً، و(20) من الكوادر الصحية المساندة. وأظهرت نتائج الدراسة وجود أثر سلبي ذي دلالة إحصائية للتحديات المرتبطة بالأزمات على أداء مقدمي الرعاية الصحية، حيث أسهم النقص الحاد في الأدوية والمستلزمات الطبية، إلى جانب الزيادة الكبيرة في أعداد المرضى، في ارتفاع مستويات الضغط النفسي والاحتراق الوظيفي لدى العاملين، مما انعكس سلباً على قدرتهم في تقديم خدمات صحية ذات جودة عالية. كما بينت النتائج انخفاض مستوى الرضا الوظيفي وارتفاع مستوى الضغوط النفسية نتيجة تكرار الأزمات. وأوصت الدراسة بضرورة تعزيز جاهزية النظام الصحي لمواجهة الأزمات من خلال دعم الموارد البشرية، وتوفير الإمدادات الطبية بشكل مستدام، وتطوير خطط الطوارئ، إضافة إلى توفير برامج دعم نفسي واجتماعي للعاملين في القطاع الصحي، بما يسهم في تحسين أدائهم وضمان استمرارية وجودة الخدمات الصحية خلال فترات الأزمات.

الكلمات المفتاحية: الأزمات، التحديات الصحية، أداء مقدمي الرعاية الصحية، مجمع الشفاء الطبي.

ISSN: 2410-7727

- The General frame work of the research

Introduction

The health sector in the Gaza Strip has experienced one of the most severe and complex periods in its modern history as a result of repeated wars and prolonged crises, including the conflicts of 2008, 2012, and 2014, the Great March of Return, the COVID-19 pandemic, and most notably the 2023 war (Pub Med Central, 2025).

These successive emergencies placed exceptional pressure on the healthcare system, leading to widespread destruction of infrastructure, severe shortages of medical supplies and human resources, disruption of supply chains, and a dramatic increase in humanitarian and health needs (UNRWA,2024). Hospitals were among the most affected institutions, with Al-Shifa Medical Complex-Gaza's largest and main referral hospital bearing the greatest burden as it functioned as the primary emergency center during mass-casualty events, while simultaneously facing shortages of staff, fuel, medications, and partial destruction of its facilities amid a near-total blockade (Hassan, R., et al., 2022).

Despite these extreme conditions, healthcare providers at Al-Shifa Hospital demonstrated remarkable resilience and professional commitment, continuing to deliver emergency and life-saving care under unsafe and highly constrained circumstances. Medical teams were exposed to overwhelming workloads, direct security threats, and severe psychological and physical exhaustion due to continuous influxes of wounded patients and prolonged working hours. At the same time, damage to power, water, and sanitation systems further compromised infection control and patient safety. The experience of Al-Shifa Medical Complex during these crises represents a critical case for understanding how prolonged conflict affects healthcare provider performance and system resilience, underscoring the urgent need for systematic documentation and analysis to inform future health emergency preparedness and crisis management in conflict-affected settings (MOH,2018).

Research Problem

Healthcare systems operating in conflict-affected settings are exposed to extreme, prolonged, and multidimensional pressures that significantly undermine their operational capacity and the performance of healthcare providers. In the Gaza Strip, decades of political instability, recurrent military confrontations, and systematic damage to health infrastructure have produced a persistent crisis context in which healthcare providers are compelled to deliver critical services under conditions of chronic resource shortages, heightened security risks, excessive workloads, and cumulative psychological distress. As the largest and most central tertiary referral hospital in the Gaza Strip, Al-Shifa Medical Complex has been at the core of emergency response efforts, particularly during the 2023 war and its continuing humanitarian repercussions. Healthcare providers at the complex have faced unprecedented professional, administrative, and psychological challenges that may adversely affect their performance, clinical judgment, coping capacity, and

ISSN: 2410-7727

quality of healthcare delivery. These challenges extend beyond routine occupational stress and reflect the compounded impact of prolonged exposure to crisis conditions. Despite the central role of healthcare providers in sustaining health services during armed conflict, there remains a notable lack of empirical, context-specific research particularly within Palestinian and Arabic scholarly literature examining the relationship between crisis-related challenges and healthcare providers' performance in prolonged emergency settings. Existing studies often focus on infrastructure damage or service availability, while insufficient attention is given to the human element of healthcare systems, namely the performance and resilience of healthcare providers operating under sustained crisis pressures.

This gap in evidence limits the ability of policymakers, health authorities, and hospital administrators to design effective crisis management frameworks, psychosocial support systems, and human resource policies that are responsive to the realities of conflict-affected healthcare environments. Accordingly, the research problem lies in the need for a systematic and evidence-based examination of the nature and intensity of crisis-related challenges faced by healthcare providers at Al-Shifa Medical Complex, and an analysis of how these challenges influence their professional, administrative, and psychological performance during periods of war and prolonged humanitarian crisis.

Therefore, the central research question guiding this study is: What is the impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip?

Importance of the Study

The importance of this study lies in its scientific, practical, and humanitarian relevance within the context of prolonged crises and armed conflict in the Gaza Strip. Recurrent wars, compounded by chronic siege and large-scale emergencies such as the Great March of Return and the COVID-19 pandemic, have placed exceptional and sustained pressure on the Palestinian healthcare system. These conditions have profoundly affected healthcare providers, particularly those working at Al-Shifa Medical Complex, the largest and most central referral hospital in Gaza, which has consistently borne the heaviest burden during periods of mass casualties and system collapse.

From a scientific perspective, this study addresses a critical gap in Arabic and Palestinian academic literature concerning the impact of prolonged crises and warfare on the performance of healthcare providers in conflict-affected and resource-constrained settings. Despite the central role of healthcare workers in sustaining life during emergencies, limited empirical research has systematically examined how crisis-related challenges influence their professional, administrative, and psychological performance. By focusing on Al-Shifa Medical Complex as a case study, this research contributes original evidence that can advance theoretical understanding of crisis management and performance dynamics within healthcare institutions operating under extreme conditions.

ISSN: 2410-7727

Research Objectives

General Objectives

The aim of this study is to determine the impact of crisis challenges on the performance of healthcare providers at Al Shifa Medical Complex in the Gaza Strip.

Specific Objectives

1. Assess the level of crisis-related challenges faced by healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.
2. Evaluate the performance level of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.
3. Examine the impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.
4. Determine whether there are statistically significant differences in perceptions of crisis-related challenges based on personal variables (gender, age, educational qualification, years of experience, and job title).

Research questions

The main question addressed in this study what is the impact of the crisis's challenges on the performance of healthcare providers at Al Shifa Medical Complex in the Gaza Strip? This question is divided into the following sub questions:

- What is the level of crisis-related challenges faced by healthcare providers at Al-Shifa Medical Complex in the Gaza Strip?
- What is the level of performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip?
- What is the impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip?
- Are there statistically significant differences in respondents' average opinions on crisis-related challenges attributable to personal variables (gender, age, educational qualification, years of experience, and job title

  Are there statistically significant differences in respondents' average opinions on **Research Hypothesis (With Dimensions)**

Main Hypothesis

H_0:

Crisis-related challenges, in their combined dimensions, have no statistically significant effect on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.

ISSN: 2410-7727

H_1:

Crisis-related challenges, in their combined dimensions, have a statistically significant effect on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.

Sub-Hypotheses of the Main Hypothesis

First Sub-Hypothesis

H_0:

Professional crisis-related challenges have no statistically significant effect on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.

H_1:

Professional crisis-related challenges have a statistically significant effect on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.

Second Sub-Hypothesis

H_0:

Administrative crisis-related challenges have no statistically significant effect on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.

H_1:

Administrative crisis-related challenges have a statistically significant effect on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip.

Research Boundaries

The scope of this study is defined according to the four main boundaries:

1. **Human Boundary**

The study focuses on **healthcare providers,** including **doctors, nurses, pharmacists and paramedical.**

2. **Placed Applied Boundary**

The study is limited to Al-Shifa Medical Complex in the Gaza Strip.

3. **Topically Boundary**

The study examines the impact of the crises challenges on the healthcare provider performance.

ISSN: 2410-7727

4. Timely Boundary

The research covers the period from 2023 to 2026.

Research Variables and Models

The study variables were defined as follows:

- **Independent Variable (Crises Challenges)**
  - **Resource Limitations**: Availability of staff, equipment, and supplies.
  - **Psychological Stress**: Impact of stress and burnout on healthcare providers.
  - **Training and Preparedness**: Effectiveness of training programs for crisis management.
  - **External Collaboration**: Partnerships with NGOs or other organizations during crises.
- **Dependent Variable (Performance of Healthcare Providers)**
  - **Quality of Care**: Patient outcomes, adherence to treatment protocols, and overall healthcare delivery effectiveness.
  - **Work Efficiency**: Response times and productivity metrics of healthcare services.
  - **Patients Satisfaction**: Feedback from patients regarding their care experience.

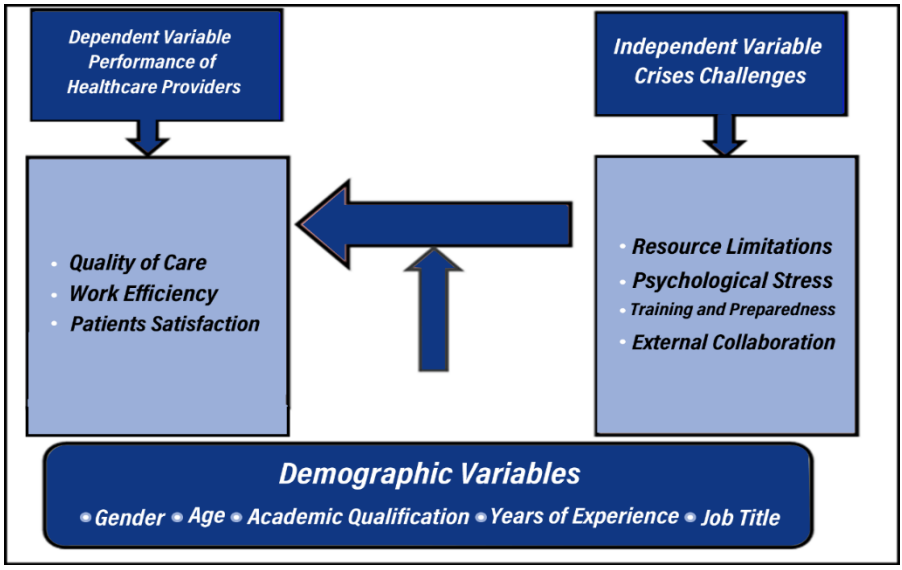

Fig 1.1: The conceptual frame work of the study designed by the researcher in (2023)

ISSN: 2410-7727

Research Limitations

- Healthcare providers faced difficulties maintaining a continuous presence at Al-Shifa Medical Complex due to their repeated displacement from the northern to the southern areas of the Gaza Strip as a result of the Israeli hostilities.
- Due to the rapid sequence of events, including ongoing bombardments and the resulting injuries and martyrdom of many medical service providers, it has become difficult to obtain any statements or information from them at this time.
- The absence of a regular electricity supply makes it extremely difficult to work under such conditions.
- The instability of the security situation has undermined job and operational stability within the Ministry of Health in Gaza, which serves as the main pillar of the health system in the Gaza Strip.
- Limited local and global studies on the subject.

Research Terminologies

Scientific Definitions of Crises Challenges

- Challenges of crises are a set of interconnected factors that hinder the ability of institutions, states, or societies to respond quickly and effectively to unexpected disruptions. These factors include difficulties in decision-making, a lack of accurate information, time pressure, the overlap of economic, social and political dimensions as well as the increasing complexity resulting from globalization and the interdependence of modern systems (Hermann, Charles F. (2024).
- Crisis challenges related to decision-making are represented by the difficulty of making quick and accurate decisions amid unclear information, time limitations, and psychological and organizational pressures (Boin A., T Hart, P., Stern, E., & Sundelius, B. 2023).
- Hospitals face multiple challenges during crises including limited medical resources, increased patient load, staff shortage, disrupted supply chains and administrative difficulties (WHO,2020).

Operational definitions of Crises Challenges

- Crisis challenges from the communication perspective are those resulting from weak communication channels, the spread of rumors, conflicting messages, and the difficulty of delivering accurate information to stakeholders in a timely manner (Coombs, W. T., 2022).
- Crisis management is the administrative process that deals with unexpected and threatening events that may harm an organization, its operations, or its environment. It aims to anticipate potential crises, plan for them, and respond in an organized manner to reduce their negative impacts (Wikipedia, 2022).

ISSN: 2410-7727

- Crisis challenges from the perspective of crisis management are the difficulties that arise during the crisis management cycle and affect the stages of preparedness, response, containment, and recovery, due to organizational complexity, role conflicts, and lack of readiness (Mitroff, I. I., (2020).

Definitions of the performance of healthcare providers

- Healthcare provider performance involves assessing the practices of healthcare professionals, including their approaches to medication prescribing, patient counseling, and the overall effectiveness of their patient care management. This evaluation is essential to ensure that healthcare providers meet the necessary standards in delivering quality care and improving patient outcomes. Through such assessments, healthcare systems can identify areas for improvement and enhance the performance of healthcare providers (Wisdom Library,2024).
- Healthcare provider performance includes evaluating healthcare professionals' practices such as medication prescribing, patient counseling, and the effectiveness of their patient care management, as reported by regional sources, emphasizing the importance of quality in healthcare delivery (Wisdom Library,2024).

-Literature Review and Previous Studies

This chapter aims to establish the theoretical foundation of the study by reviewing the key concepts related to crisis management and crisis challenges, as well as the performance of healthcare providers. It also highlights the importance and dimensions of each variable. In addition, the chapter presents a critical review of relevant previous studies in order to identify research gaps and support the conceptual framework upon which the current study is based.

- **The concept of the crises management**
- **Crisis management is defined as the process of preserving the organization's assets and properties, maintaining its ability to generate revenue, and protecting its personnel and employees from various risks. It involves the responsibility of managers in this activity to identify potential risks and attempt to avoid them or mitigate their impact on the organization if complete avoidance is not possible (Marefa.Org, 2025).**
- Crisis management in management is defined as the process that involves planning, preparation, and handling unexpected or emergency events that may threaten the stability of the organization or its ability to operate effectively (Alkhateeb, T. T. (2017).
- Crisis challenges are administratively defined as the set of difficulties and pressures that management faces before, during, and after a crisis which delay its ability to make rapid and effective decisions, coordinate resources, communicate

ISSN: 2410-7727

with participants and maintain business continuity among uncertainty, lack of information, time constraints, and heightened risks **Coombs, W. T. (2019).**

- **The elements of crisis management and its importance**

Crisis management is defined as a systematic process that involves planning for, preparing to, and responding to unexpected events that may threaten the stability, operations, or survival of organizations. The elements of crisis management represent the core pillars that enable organizations to anticipate crises, reduce their negative impacts, and ensure effective response and recovery. These elements can be outlined as follows:

Crisis Identification refers to the early recognition of events or conditions that have the potential to escalate into a crisis. Early identification is essential, as organizations cannot address risks or threats unless they are first recognized. Effective crisis identification allows management to initiate preventive measures and activate preparedness mechanisms in a timely manner.

Crisis Planning involves the development of proactive strategies, policies, and contingency plans designed to manage potential crises before they occur. The importance of crisis planning lies in its role in reducing uncertainty and panic, enhancing organizational readiness, and accelerating response speed when a crisis emerges.

Crisis Response refers to the implementation of predetermined plans, procedures, and decisions during the occurrence of a crisis. An effective crisis response ensures rapid and appropriate actions, which significantly minimize losses, contain the crisis, and prevent further escalation of its negative consequences.

Crisis Communication entails the dissemination of accurate, clear, and transparent information to all relevant stakeholders throughout the crisis lifecycle. Effective communication is crucial for maintaining trust, coordinating actions, and preventing misinformation and rumors that may exacerbate the crisis and negatively affect organizational performance.

Crisis Recovery focuses on restoring normal operations and organizational conditions after the crisis has subsided. The recovery phase is vital for ensuring business continuity, rebuilding capacities, and reducing the likelihood and impact of future crises.

Post-Crisis Evaluation involves systematically assessing how the crisis was managed, identifying strengths and weaknesses in the response, and extracting lessons learned. This element is particularly important because every crisis represents a learning opportunity that can enhance organizational preparedness and improve future crisis management practices (Trust Community, 2025).

- **Crises Management Problems and Their Solutions**

Despite the importance of crisis management, organizations often face several challenges that hinder effective crisis handling. One of the most significant problems

ISSN: 2410-7727

is **delayed crisis detection**, where the failure to identify early warning signs leads to increased losses and limited response options. To address this issue, organizations should establish continuous risk monitoring and analysis systems, in addition to training employees to recognize potential warning indicators.

Another common problem is **weak crisis planning**, as the absence of clear and comprehensive plans often results in confusion and disorder during crisis situations, thereby exacerbating negative outcomes. This challenge can be mitigated by developing detailed emergency and contingency plans that cover various potential scenarios, regularly updating these plans, and reviewing them after each crisis to prevent recurrence.

Ineffective communication during crises also poses a major challenge, as inaccurate, delayed, or inconsistent information increases uncertainty, fuels rumors, undermines trust, and ultimately weakens organizational performance. To overcome this problem, organizations must establish official and reliable communication channels and train dedicated crisis communication teams to deliver timely, transparent, and consistent messages.

Resistance to change within organizations represents another obstacle, as some employees may reject necessary adjustments and new procedures introduced during crises. Addressing this issue requires raising awareness about the importance of change, fostering a culture of flexibility, and involving employees in decision-making processes to enhance acceptance and commitment.

- **The importance of The Crises Challenges**

Crisis challenges derive their importance from the critical role they play in enhancing the preparedness and resilience of individuals, organizations, and communities. Crises often expose structural weaknesses and operational gaps within systems, thereby providing valuable opportunities to develop more effective strategies for managing future risks. The importance of crisis challenges lies in their contribution to strengthening adaptability to changing circumstances, improving decision-making processes, stimulating creativity and innovation, and reinforcing social and institutional cohesion (Coombs, 2022).

In healthcare institutions, the importance of crisis challenges can be examined from two primary perspectives:

- **For the institution is as follows:**

Crisis challenges compel healthcare institutions to seek innovative and alternative solutions to complex problems. Confronting crises enhances the institution's ability to adapt to rapidly changing conditions and uncertain environments. Additionally, crises reveal organizational strengths that can be reinforced, as well as weaknesses that require corrective action, thereby contributing to improved future performance. Moreover, effectively addressing crisis challenges

ISSN: 2410-7727

supports the development of long-term strategic plans aimed at enhancing institutional stability and sustainability.

- **For the employee is as follows:**

At the individual level, crisis challenges play a significant role in developing employees' problem-solving and decision-making skills. Facing demanding situations enhances employees' ability to adapt to new requirements and changing work conditions. Successfully overcoming crisis-related challenges increases employees' self-confidence and professional resilience. Furthermore, crisis experiences teach employees how to maintain acceptable levels of performance and service quality despite high levels of pressure and stress.

- **The Dimensions of Crisis Challenges**

Crisis challenges are characterized by their sudden, complex, and multidimensional nature, which requires a comprehensive understanding of their various dimensions in order to manage them effectively. These dimensions reflect the diverse areas affected by crises and the extent to which their impacts extend beyond immediate operational disruption. The main dimensions of crisis challenges can be classified as follows:

- **The Strategic Dimension** refers to the extent to which crises influence an organizations or a state's long-term plans, strategic objectives, and policy directions. Crises often force decision-makers to reconsider priorities, reallocate resources, and adjust strategic goals in response to rapidly changing conditions.
- **The Psychological and Behavioral Dimension** relates to the impact of crises on the mental health and behavior of individuals and communities. Crises may generate high levels of anxiety, stress, fear, and uncertainty, which can lead to loss of trust, emotional exhaustion, and behavioral disturbances. In healthcare settings, this dimension is particularly critical due to prolonged exposure of healthcare providers to stressful and life-threatening situations.
- **The Political and Social Dimension** encompasses the effects of crises on political stability, institutional legitimacy, and the effectiveness of public policies. From a social perspective, crises can intensify social problems such as poverty, unemployment, forced migration, conflicts, and social fragmentation. Global crises, such as the COVID-19 pandemic, have clearly demonstrated the interconnected political and social consequences of large-scale crises (Reinhart & Rogoff, 2020).

- **The concept of psychological stress**

Psychological stress refers to a multidimensional state that arises when individuals perceive those environmental demands exceed their adaptive capacities and available coping resources. This imbalance between external pressures and internal resources activates complex physiological, emotional, cognitive, and

ISSN: 2410-7727

behavioral responses aimed at restoring equilibrium, When stressors persist or intensify without adequate coping mechanisms, they may disrupt psychological stability and impair overall functioning (WHO, 2022).

From a theoretical perspective, psychological stress is not merely a reaction to external events but is shaped by the individual's cognitive appraisal of the situation. According to the transactional model of stress, individuals continuously evaluate whether a given demand represents a threat, challenge, or harm, and whether they possess sufficient resources to manage it. Therefore, stress outcomes vary depending on both contextual factors and personal resilience.

In healthcare settings, psychological stress assumes a particularly critical dimension. Healthcare professionals operate in environments characterized by high responsibility, time pressure, emotional exposure, and moral accountability. During crises such as armed conflict, large-scale emergencies, or system collapse these stressors intensify significantly. Excessive workloads, exposure to traumatic injuries, fear for personal and family safety, ethical dilemmas in resource allocation, and prolonged uncertainty collectively amplify stress levels among healthcare providers (Shanafelt, T., Ripp, J. & Trockel, M. (2021).

Reports from World Health Organization (2020) indicate that healthcare workers in crisis settings face elevated risks of anxiety, depression, burnout, and psychosomatic symptoms. When unmanaged, prolonged psychological stress may lead to emotional exhaustion, depersonalization, reduced professional efficacy, impaired clinical judgment, and decreased quality of patient care.

i. Arabic Studies

1. Investigation of Crisis and Disaster Preparedness among Jordanian Healthcare Providers: A Cross-Sectional Study

Hammad et al. (2025) conducted a cross-sectional study to evaluate the level of crisis and disaster preparedness among healthcare providers in Jordan, including their readiness to respond to health emergencies and large-scale incidents. The study utilized a standardized questionnaire to assess preparedness levels among 282 healthcare professionals working in five public hospitals.

The findings revealed that the overall level of preparedness was moderate. Moreover, statistically significant differences were identified among professional categories, including physicians, nurses, and technicians, suggesting variability in crisis-response competencies across occupational groups. The results also indicated gaps in specialized training and practical competencies related to crisis management and disaster response.

The significance of this study lies in its demonstration that crisis preparedness represents a fundamental determinant of healthcare providers' performance and operational efficiency, particularly in high-pressure and emergency environments. Moderate preparedness levels may limit healthcare workers' ability to respond

ISSN: 2410-7727

effectively to unexpected crises, potentially affecting patient safety, service continuity, and institutional resilience.

These findings are highly relevant to the current study, which examines the impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip. While Hammad et al. (2025) focused on preparedness in a relatively stable healthcare context, the present study investigates performance under prolonged and compounded crisis conditions, including armed conflict and systemic resource shortages.

2. Crisis Management and its Impact on Hospital Performance: A Field Study on King Salman Hospital in Riyadh

AlMoanes (2025) conducted a field study to examine the impact of crisis management practices on hospital performance at King Salman Hospital in Riyadh. The study analyzed crisis management across four key stages: preparedness and prevention, damage containment and mitigation, recovery (restoration of activity), and organizational learning.

The findings demonstrated strong agreement among respondents regarding the importance of implementing all stages of crisis management within hospital settings. Participants emphasized that effective application of these stages enhances institutional readiness, improves coordination during emergencies, and strengthens response mechanisms. Statistical analysis confirmed that crisis management has a significant positive impact on hospital performance indicators.

Specifically, the study concluded that comprehensive crisis management practices contribute to improving patient safety, reducing mortality rates, minimizing medical errors, and maintaining service continuity during emergencies. The learning stage was highlighted as particularly important, as it enables institutions to evaluate crisis responses and refine future strategies.

These findings are highly relevant to the current study, which investigates the impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip. While AlMoanes (2025) focused on a hospital operating within a relatively stable healthcare infrastructure, the present study examines performance under prolonged and compounded crisis conditions, including armed conflict, resource scarcity, and systemic instability.

Therefore, integrating the four stages of crisis management into the analytical model of the current research strengthens the theoretical foundation of the study and provides a structured lens through which performance outcomes can be interpreted within crisis environments.

ISSN: 2410-7727

3. **Providing** Care under Extreme Adversity: The Impact of the Yemen Conflict on Health Workers

The study was used as the main source because it relies on direct data from healthcare workers and determines the impact of crises on their performance. It also highlights the general effect on the healthcare workforce in Aden, and WHO reports were used to provide a background on the status of health services and facilities in Aden as part of the analysis of the health environment.

The study relied on in-depth interviews with 43 healthcare workers, and focus group discussions with healthcare providers gathered in Sana'a, Aden, and Taiz.

The importance of the study lies in its scientific description of the impact of the crisis on the performance of healthcare providers and their professional and personal lives in Aden.

The results emphasized that the staff faced ongoing violence and security tensions while performing their duties under very difficult working conditions, including shortages of essential supplies and medicines, prolonged salary suspensions, and professional and personal psychological pressures, which negatively affected their health and work (PMC, 2025).

ii. Foreign Studies

1. Emotional resilience and sense of danger among doctors in hospitals during periods of heightened tensions and warfare in Israel

A recent study published in the Israel Journal of Health Policy Research (2024) investigated the impact of war and heightened security tensions on physicians' professional functioning within Israeli hospitals. The study aimed to assess how exposure to conflict-related environments influences doctors' performance by examining two central variables: personal emotional resilience and perceived sense of danger while working in hospitals located near active conflict zones.

The research adopted a comparative design, contrasting physicians employed in hospitals in southern Israel geographically proximate to Gaza and frequently exposed to security escalations with those working in hospitals situated in relatively secure regions. This comparison allowed for the evaluation of contextual exposure to threat as a determinant of psychological and professional outcomes..

This study provides important empirical evidence regarding the psychological mechanisms through which exposure to conflict environments affects healthcare professionals. The identification of perceived danger as a significant stressor aligns closely with the conceptualization of crisis challenges in the present research. In environments characterized by armed conflict, healthcare providers are not only confronted with clinical overload but also with direct or indirect threats to personal safety..

ISSN: 2410-7727

Furthermore, while the Israeli study highlights emotional resilience as a moderating variable that buffers the impact of perceived danger, the current study expands this framework by examining how crisis challenges including perceived danger, psychological stress, and resource shortages collectively influence measurable dimensions of healthcare providers' performance. In doing so, the present research shifts the analytical focus from psychological adaptation alone to the broader interaction between structural crisis conditions and professional performance outcomes.

Thus, the Israeli study offers a comparative regional perspective that strengthens the theoretical foundation of the current research, while the present study contributes by investigating the phenomenon within a chronically conflict-affected health system, thereby addressing a critical gap in the literature concerning sustained crisis exposure and workforce performance (Israel Journal of Health Policy Research,2024).

2. Healthcare system resilience and adaptability to pandemic disruptions in the United States

Lu Zhong et al. (2024) examined the resilience and adaptability of the United States healthcare system in response to large-scale crisis disruptions, particularly during the COVID-19 pandemic. The study aimed to evaluate the system's structural capacity to absorb shocks, reorganize resources, and maintain service continuity amid successive waves of disruption.

The findings indicated that while the U.S. healthcare system demonstrated a measurable degree of adaptability, its flexibility remained constrained under prolonged crisis pressure. Variations in institutional responses were observed across different phases of the pandemic, suggesting that resilience was not uniformly sustained over time. Notably, the availability of an adequate number of physicians emerged as a critical determinant in strengthening systemic resilience and maintaining operational stability.

However, the study also highlighted a significant rise in burnout among physicians and nurses during crisis periods. Elevated stress levels, sustained heavy workloads, role reassignments, and insufficient psychological support contributed substantially to emotional exhaustion and professional fatigue. Importantly, burnout was found to be directly associated with reduced patient safety outcomes and diminished quality of care, underscoring its operational consequences beyond individual well-being.

This study contributes to the theoretical understanding of crisis resilience by demonstrating that system adaptability depends not only on structural capacity but also on workforce sustainability. Even within a highly resourced healthcare system such as that of the United States, prolonged crisis exposure resulted in significant burnout, which in turn negatively affected service quality and patient safety.

ISSN: 2410-7727

Moreover, the study reinforces a central assumption of the current research: resilience at the system level cannot be sustained without safeguarding the psychological and professional stability of healthcare providers. Burnout, excessive workload, and insufficient support structures are not merely individual health concerns; they represent systemic risk factors that directly influence performance indicators such as efficiency, service quality, and organizational continuity.

By integrating these insights, the present study extends the discussion of resilience from macro-level system adaptability to micro-level workforce performance within a protracted crisis setting. It empirically investigates how crisis challenges including workload intensity, resource shortages, and psychological stress shape the operational capacity of healthcare providers in a conflict-affected institution (Lu Zhong, Dimitri, L., Sen Pei, Jianxi Gao, 2024).

3. Mental Health, Burnout and Job Stressors Among Healthcare Workers During the COVID-19 Pandemic in Iran

Hajebi et al. (2022) conducted a cross-sectional study to assess mental health status, occupational stress, and burnout levels among healthcare workers in hospitals and healthcare centers across Iran during the COVID-19 pandemic. The study aimed to:

1. Estimate the prevalence of anxiety and depression among healthcare professionals during the crisis,
2. Measure levels of occupational burnout and its impact on hospital staff, and identify job-related stressors associated with professional duties during the pandemic period.

The findings revealed that more than half of the participants exhibited symptoms of generalized anxiety, depression, or both during the crisis. Additionally, a substantial proportion of healthcare workers experienced moderate to high levels of occupational burnout. The study identified several predictive factors contributing to psychological stress and burnout, particularly concerns about family members' health and reciprocal fears within families regarding the healthcare worker's exposure to infection. These findings underscore the multidimensional nature of crisis-related stress, extending beyond workplace pressures to include family-related and social stressors.

The Iranian study provides empirical evidence that large-scale health crises significantly compromise the psychological well-being of healthcare workers, leading to elevated anxiety, depressive symptoms, and burnout. These findings strongly support the theoretical foundation of the present research, which conceptualizes psychological stress and burnout as key consequences of crisis exposure.

Moreover, Hajebi et al. (2022) identified family-related concerns as significant predictors of stress and burnout. This dimension is particularly relevant to the Gaza

ISSN: 2410-7727

context, where healthcare workers often face simultaneous professional obligations and direct threats to their families' safety during periods of conflict. Thus, the cumulative psychological burden in such an environment may be intensified by the convergence of occupational stressors and existential insecurity (Hajebi, A., Abbasinejad, M., Zafar, M., & Taremian, F. ,2022).

The present study extends beyond measuring mental health outcomes by examining how crisis challenges including psychological stress and burnout translate into measurable performance indicators such as professional efficiency, service quality, organizational commitment, and functional stability. In doing so, it moves from documenting psychological distress to empirically analyzing its operational consequences within a high-risk healthcare institution.

Accordingly, the Iranian study reinforces the conceptual argument that crisis exposure significantly affects healthcare workers' psychological health, while the current research contributes by situating this relationship within a protracted conflict environment and linking psychological outcomes directly to performance metrics. This analytical extension represents a substantive addition to the regional and international literature on healthcare workforce resilience in crisis settings.

Field Study

4.1.1 Sample and Sampling Technique

Due to the large size of the study population and the exceptional conditions prevailing during the 2023 war including security risks, staff displacement, excessive workload, and limited access to hospital departments it was not feasible to include the entire population. Therefore, a sample representing 10% of the total healthcare workforce at Al-Shifa Medical Complex was selected for participation in the study.

The total sample size 1350 divided to 450 physicians, 610 nurses, 90 pharmacists, and 200 paramedical staff, the sample included 45 physicians, 61 nurses, 9 pharmacists, and 20 paramedical staff, representing approximately 10% of each category. This method guarantees statistical representation while remaining feasible during crisis conditions.

By using this approach, the study balances accuracy, representativeness, and feasibility, ensuring that the results reflect the experience and performance of healthcare providers at Al-Shifa Medical Complex during crisis periods.

ISSN: 2410-7727

Table 4.1: Distribution of the participants according to their specialties

Target Population	The number
Physicians	45
Pharmacists	9
Nurses	61
Paramedical	20
Total	**135**

4.1.2 Period of the study

The study conducted at the end of year 2023. After obtaining approval for the study proposal from the University of Al-Butana, an administrative letter sent to the General Directorate of Human Resource Development at MOH in 2023 to offer facilitation for conducting the study in MOH hospital. Data collected started from 1st Oct 2023 to Jan. 2024. Data analysis and discussion is finished at first Mar., to 1st Apr. 2025. The study took approximately 1 years in total from its beginning. **It should be noted that the delay in conducting the study was due to the Gaza War in 2023.**

4.1.3 Eligibility Criteria

4.1.3.1 Inclusion Criteria

Individual who are working in the medical field including doctors, pharmacists, nurses, and other medical staff in Al-Shifa Medical Complex.

4.1.3.2 Exclusion criteria

Staff who are not working in the medical field such as administrative staff, maintenance and cleaners in Al-Shifa Medical Complex

4.1.4 Ethical and Administrative Considerations

Before conducting the study, the researcher obtained approval from Helsinki Committee and Ministry of Health to conduct the study, in addition, consent form was obtained from the participants confirming their agreement to participate in the study.

4.1.5 Pilot Study

A pilot study for the questionnaire was conducted before real data collection. It provides a trial run for the questionnaire, which involves testing the wordings of question, identifying ambiguous questions, testing the techniques that are used to collect data, and measuring the effectiveness of standard invitation to respondents (Fitzpatrick and Wallace, 2006). The researcher included 25 participants from the study population, who met the inclusion criteria in the pilot study to assess how easy was the instrument to use, to explore any ambiguity in the terms and to estimate the

ISSN: 2410-7727

time needed to complete the questionnaire. Since no change was done on the instrument, these participants were included in the final data analysis.

4.2 Data Collection and Analysis

4.2.1 Study Tools

Data were collected using a structured self-administered questionnaire developed by the researcher based on a comprehensive review of relevant literature and previous studies.

The questionnaire included multiple questions. The variety of these questions is designed first to meet up with the research objectives, also to gather all the required data that can support the conversation, results and advice in the study. The questionnaire made up of three sections to perform the purpose of the research. The following is a detailed description of the questionnaire content

4.2.2 Validity of study instruments

4.2.2.1 Face Validity

To increase the response rate, it is important to maintain good face validity for the questionnaire. The researcher constructed the questionnaire in an appealing design. And researcher asked the participants in the pilot study about their opinions regarding the structure, shape, clarity and format.

4.2.2.2 Content Validity

The questionnaire was evaluated by experts to validate the questions and their relation to the domains that reflect the study and their comments were taken into consideration and modification was performed accordingly. Many useful and important modifications and comments were made and taken into consideration for the questionnaire.

4.2.2.3 Statistical Validity

To ensure the validity of the questionnaire, two statistical tests should be applied. The first test is internal validity (Pearson test) which measure the correlation coefficient between each item in the dimension and the whole dimension. The second test is structure validity (Pearson test) that used to test the validity of the questionnaire structure by testing the validity of each dimension and the validity of the whole questionnaire. It measures the correlation coefficient between one dimension and all the dimensions of the questionnaire that have the same level of similar scale.

Internal validity

The internal consistency was measured by calculating the value of the correlation coefficient the paragraph and the total degree of the dimension to which this paragraph belongs.

ISSN: 2410-7727

Firstly: Validity of the internal consistency of the dimension (Crisis Challenges)

Results in table (4.4) showed that the probability value of each paragraph of the dimension is less than the level of significance 0.05, and this confirms the statistical relationship between the paragraph and the total score of the dimension, and this means that these paragraphs have measured the goal for which they were set.

Table 4.2: The correlation coefficient between each paragraph in the dimension and the total degree of the dimension (Crisis Challenges)

No.	Paragraphs	Correlation Coefficient	p-value
Resource Limitations			
1.	There is an adequate number of healthcare providers during crises.	0.685	0.001
2.	Medications and medical supplies are sufficient to deal with crises.	0.711	0.001
3.	Shortages of healthcare providers or supplies negatively affect my ability to provide medical care.	0.725	0.001
4.	The healthcare facility is well-equipped with resources to manage crises.	0.738	0.001
5.	The absence of security poses a risk to healthcare providers.	0.695	0.001
6.	Patient overcrowding increases the difficulty of providing healthcare.	0.745	0.001
7.	Power outages directly affect healthcare delivery.	0.781	0.001
Psychological Pressures			
○	I often feel stressed due to crises at my workplace	0.771	0.001
○	Fatigue affects my ability to perform tasks effectively	0.651	0.001
○	I experience psychological exhaustion during prolonged crises	0.647	0.001
○	Stress affects my decision-making in critical situations	0.724	0.001
○	I make extra efforts to cover staff shortages	0.811	0.001
○	I consider leaving work due to multiple pressures during crises	0.726	0.001

ISSN: 2410-7727

No.	Paragraphs	Correlation Coefficient	p-value
Training and Preparedness			
•	Training programs adequately prepare me to handle crises	0.666	0.001
•	I feel confident in my ability to manage emergencies due to prior training	0.779	0.001
•	The training I received is regularly updated to address new challenges	0.757	0.001
•	I have access to clear protocols and guidelines during crises	0.658	0.001
•	There is an emergency plan in place to manage crises, either previous or future	0.729	0.001
External Collaboration			
•	Partnerships with NGOs or other organizations help improve crisis management	0.652	0.001
•	I actively participate in joint initiatives with external organizations during crises	0.647	0.001
•	Collaboration with external organizations enhances the quality of care provided during emergencies	0.638	0.001
•	Logistical support from international organizations is sufficient to improve crisis management	0.674	0.001

Secondly: Validity of the internal consistency of the dimension (Healthcare Providers' Performance)

Results in table (4.5) showed that the probability value of each paragraph of the dimension is less than the level of significance 0.05, and this confirms the statistical relationship between the paragraph and the total score of the dimension, and this means that these paragraphs have measured the goal for which they were set.

ISSN: 2410-7727

Table 4.3: The correlation coefficient between each paragraph in the dimension and the total degree of the dimension (Healthcare Providers' Performance)

No.	Paragraphs	Correlation Coefficient	p-value
Quality of Care			
1.2	I can maintain a high quality of care even during crises.	0.622	0.001
1.3	Adherence to treatment protocols continues despite limited resources.	0.728	0.001
1.4	Patient health outcomes are not significantly affected by crises.	0.734	0.001
1.5	I demonstrate strong decision-making skills during crises.	0.758	0.001
1.6	There is effective and continuous coordination during crises.	0.778	0.001
1.7	I maintain professional standards of care during crises.	0.724	0.001
Work Efficiency			
3.5	I can respond quickly to patients' needs during crises	0.663	0.001
3.6	My productivity remains high even under crisis conditions	0.698	0.001
3.7	I manage time effectively despite challenges posed by crises	0.675	0.001
3.8	I work according to policies and protocols compatible with reality	0.672	0.001
3.9	I continue providing healthcare to patients despite security risks	0.643	0.001
Patient Satisfaction			
1.	Patients express satisfaction with the care they receive during crises	0.637	0.001
2.	I receive positive feedback from patients regarding my performance	0.647	0.001
3.	Patient complaints are minimal even under crisis conditions	0.728	0.001

Structure Validity

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each dimension and the validity of the whole questionnaire. It measures the correlation coefficient between one

ISSN: 2410-7727

dimension and all the dimensions of the questionnaire that have the same level of liker scale.

As shown in table (4.6), the significance values are less than 0.05, so the correlation coefficients of all the dimensions are significant at $\alpha = 0.05$, so it can be said that the dimensions are valid to be measured what it was set for to achieve the main aim of the study.

Table 4.4: Correlation coefficient of each field and the whole of questionnaire

No.	Dimension	Correlation Coefficient	p-value
Crisis Challenges		**0.788**	**0.001**
1	Resource Limitations	0.795	0.001
2	Psychological Pressures	0.727	0.001
3	Training and Preparedness	0.791	0.001
4	External Collaboration	0.734	0.001
Healthcare Providers' Performance		**0.767**	**0.001**
1.	Quality of Care	0.824	0.001
2.	Work Efficiency	0.737	0.001
3.	Patient Satisfaction	0.718	0.001

4.2.3 Socio-demographic characteristics of participants

The importance of demographic information to meaningful quantitative analysis cannot be undermined. Background and demographic information from respondents were also stained. This section analyzed the demographic information of 135 respondents as shown in Table (4.7).

Table 4.5: Socio-demographic characteristics of participants

Variable	Frequency (F)	Percent (%)
Gender		
Male	101	74.8
Female	34	25.2
Education Level		
Diploma	16	11.9
Bachelor	80	59.2
Postgraduate	39	28.9
Age		
Less than 25 years	4	3.0
25 to less than 35	49	36.3
35 to less than 45	44	32.6
45+	38	28.1

ISSN: 2410-7727

Variable	Frequency (F)	Percent (%)
Years of experience		
Less than 5	8	5.9
5 to less than 10	26	19.3
10 to less than 15	42	31.1
15+	59	43.7
Job title		
Physician	46	34.2
Pharmacist	6	4.4
Nurse	65	48.1
PrarMedical Assistant	18	13.3

The socio-demographic distribution of the participants provides important context for understanding the perspectives and responses reported in the study.

- **Gender**

The results show that the majority of participants were male (74.8%), whereas females represented only 25.2%. This gender imbalance may reflect staffing patterns in many healthcare institutions in Gaza, where certain professions particularly physicians and medical assistants tend to be male-dominated. Similar demographic trends were reported by El-Jardali et al. (2019), who noted a gender imbalance in several Middle Eastern healthcare settings, particularly in emergeny and acute care departments.

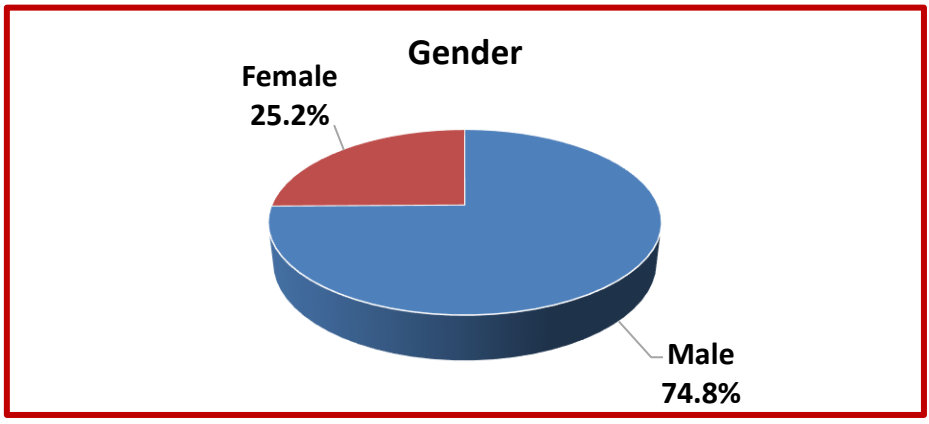

Fig 4.1: Distribution of the respondents due to gender

- **Age**

The age distribution reveals a balanced mix of younger and more experienced staff: 36.3% were aged 25–35, 32.6% were 35–45, and 28.1% were above 45 years.

ISSN: 2410-7727

Only 3% were younger than 25. This indicates that the sample mainly consists of mid-career and senior healthcare professionals, which may enhance the reliability of their responses, as they bring extensive practical experience. Similar demographic patterns have been reported in studies from low-resource and crisis-affected settings, where workforce stability often results from long-term retention rather than new recruitment (Khatib et al., 2020).

4.3 Hypotheses Testing

The main and sub-hypotheses are verified using the multiple linear regression method, where the effect of the independent variable, representing the impact of crisis challenges, on the dependent variable, healthcare providers' performance, was studied using the Ordinary Least Squares (OLS) method. The null hypothesis (Ho), which assumes no statistically significant effect, is tested against the alternative hypothesis (H1), which assumes the existence of a statistically significant effect.

- **The impact of crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex in the Gaza Strip**

This study employed regression analysis as the primary statistical tool. Regression analysis allows for assessing the strength and nature of the relationship between crisis-related challenges such as resource limitations, psychological pressures, inadequate training, and lack of external collaboration and healthcare providers' performance. To address this research question, the following hypothesis was formulated:

H_0: Crisis-related challenges have no significant effect on the performance of healthcare providers at Al-Shifa Medical Complex.

H_1: Crisis-related challenges have a significant effect on the performance of healthcare providers at Al-Shifa Medical Complex.

By testing this hypothesis using regression analysis, the study aims to identify the extent to which different crisis-related factors influence the efficiency, effectiveness, and overall performance of healthcare staff in a high-pressure environment.

ISSN: 2410-7727

Table 4.6: Regression Analysis of the Impact of Crisis-Related Challenges on the Performance of Healthcare Providers at Al-Shifa Medical Complex

Dependent variable	Independent variable	Unstandardized Coefficients		t	p-value (Sig.)
		B	Std. Error		
Healthcare Providers' Performance	C	1.608	0.339	4.741	0.000
	Resource Limitations	0.775	0.072	10.764	0.000
	Psychological Pressures	0.286	0.060	4.766	0.000
	Training and Preparedness	0.051	0.040	1.268	0.207
	External Collaboration	0.391	0.053	7.425	0.000
F= 13.934 Sig=0.000 R^2=67.2%					

The regression analysis examined the impact of various crisis-related challenges on the performance of healthcare providers at Al-Shifa Medical Complex. The model is statistically significant (F = 13.934, p = 0.000) and explains 67.2% (R^2 = 0.672) of the variance in healthcare providers' performance, indicating a strong overall effect of the independent variables.

⇒ Training and Preparedness

Training and preparedness showed a non-significant effect (B = 0.051, t = 1.268, p = 0.207), suggesting that, in this sample, formal training and preparedness programs did not have a statistically measurable impact on performance.

This result may reflect gaps in the effectiveness or frequency of training programs in Palestinian healthcare facilities. Although training is critical in theory, inadequate practical implementation, resource constraints, or infrequent drills may limit its real-world impact, as highlighted in studies by Al-Husseini (2018).

- **Differences in respondents' average opinions on crisis-related challenges attributable to personal variables (gender, age, educational qualification, years of experience, and job title)**

Understanding whether healthcare providers' perceptions of crisis-related challenges differ according to their personal characteristics is essential for tailoring interventions and support programs. Personal variables such as gender, age, educational qualification, years of experience, and job title may influence how staff perceive and cope with crises, as they often affect experience, resilience, and exposure to specific types of challenges. Examining these differences provides

ISSN: 2410-7727

insights into which groups may require additional training, resources, or psychological support to optimize performance during emergencies.

Based on the research question, the hypothesis can be formulated as follows:

H_0 (Null Hypothesis): There are no statistically significant differences in healthcare providers' perceptions of crisis-related challenges based on gender, age, educational qualification, years of experience, or job title.

H_1 (Alternative Hypothesis): There are statistically significant differences in healthcare providers' perceptions of crisis-related challenges based on gender, age, educational qualification, years of experience, or job title.

To test the hypothesis, appropriate statistical analyses should be applied depending on the type of personal variable: Gender (categorical, two groups) – Use Independent Samples t-test to compare mean perceptions between male and female respondents. Age, Educational Qualification, Years of Experience, Job Title (categorical with more than two groups) – Use One-Way ANOVA to compare mean perceptions across different categories (e.g., age groups, education levels, job titles).

Table 4.7: Differences in Respondents' Average Opinions on Crisis-Related Challenges by Personal Variables

Variable	Class	Mean	STD	Test statistic	P-value
Gender	Male	3.23	0.38	T= 0.324	0.746
	Female	3.26	0.39		
Education Level	Diploma	3.30	0.44	F=0.704	0.496
	Bachelor	3.21	0.33		
	Postgraduate	3.29	0.46		
Age	Less than 25 years	2.91	0.25	F=2.686	0.051
	25 to less than 35	3.16	0.30		
	35 to less than 45	3.31	0.37		
	45+	3.32	0.47		
Job title	Physician	3.23	0.42	F=1.162	0.327
	Pharmacist	3.11	0.26		
	Nurse	3.23	0.38		
	Medical Assistant	3.39	0.33		
Years of experience	Less than 5	3.11	0.34	F=1.178	0.321

ISSN: 2410-7727

Variable	Class	Mean	STD	Test statistic	P-value
	5 to less than 10	3.22	0.28		
	10 to less than 15	3.20	0.36		
	15+	3.31	0.44		

Investigating whether personal characteristics influence healthcare providers' perceptions of crisis-related challenges is essential for understanding how staff experience and respond to emergencies in Palestinian healthcare settings. This study examined differences in perceptions across five personal variables: gender, educational level, age, job title, and years of experience. Overall, the analysis revealed that most personal variables did not produce statistically significant differences, indicating that perceptions of crisis-related challenges are largely uniform across staff groups. Minor trends were observed for age and years of experience, where older or more experienced staff reported slightly higher perception scores, but these differences were not significant. Similarly, gender, educational level, and job title did not significantly affect perceptions, suggesting that systemic factors such as resource constraints, high patient loads, and exposure to crises have a stronger influence than personal characteristics.

- **Gender:** the mean perception scores for male (3.23) and female (3.26) healthcare providers show minimal differences, and the t-test ($T = 0.324$, $p = 0.746$) indicates that this difference is not statistically significant. This suggests that both male and female healthcare providers perceive crisis-related challenges similarly in the Palestinian context. This finding aligns with previous studies in similar conflict-affected regions (Hamdan, 2020), which reported that gender does not significantly influence perceptions of healthcare challenges during crises, likely because all staff are exposed to similar operational conditions and stressors.
- **Educational Level:** the mean scores across diploma (3.30), bachelor (3.21), and postgraduate (3.29) levels show only minor variation, and ANOVA results ($F = 0.704$, $p = 0.496$) indicate no statistically significant differences. This implies that educational qualification does not substantially affect how healthcare providers perceive crisis-related challenges. In the Palestinian context, this may reflect that regardless of education level, all staff face similar systemic constraints, including resource shortages and high patient loads. Similar conclusions were drawn by Abu-Saad et al. (2019), where education level did not significantly differentiate perceptions of workplace challenges in Gaza's hospitals.
- **Age:** Age groups show slightly more variation, with mean scores ranging from 2.91 (<25 years) to 3.32 (45+ years), and the ANOVA test ($F = 2.686$, $p = 0.051$) approaches but does not reach conventional significance. Although not statistically significant, there is a trend suggesting that more experienced and

ISSN: 2410-7727

older healthcare providers may perceive crisis-related challenges slightly more positively, possibly due to greater experience and coping strategies developed over time. This trend is consistent with Al-Husseini (2018), who reported that older and more experienced staff tend to exhibit higher resilience during crises, though differences are often modest.

- **Job Title:** Mean perceptions by job title ranged from 3.11 for pharmacists to 3.39 for medical assistants, with ANOVA results ($F = 1.162$, $p = 0.327$) showing no significant differences. This indicates that physicians, nurses, pharmacists, and medical assistants perceive crisis-related challenges similarly. In the Palestinian healthcare system, all staff categories are exposed to high patient demand, limited resources, and security pressures, which likely levels perceptions across roles. This aligns with Hamdan (2020), who found minimal variation in crisis perception across different professional roles in hospitals.
- **Years of Experience:** Mean scores range from 3.11 (less than 5 years) to 3.31 (15+ years), and ANOVA results ($F = 1.178$, $p = 0.321$) indicate no statistically significant differences. Although more experienced staff report slightly higher perception scores, the differences are not significant, suggesting that crisis exposure affects all staff relatively equally, regardless of tenure. This finding partially aligns with Al-Husseini (2018), where years of experience contributed to coping strategies but did not significantly alter overall perceptions of crisis challenges.
- **Overall,** the results indicate no statistically significant differences in perceptions of crisis-related challenges based on gender, age, educational level, job title, or years of experience. This suggests that the shared work environment, high-stress conditions, and systemic limitations in Palestinian healthcare facilities create a relatively uniform perception of crisis-related challenges across different personal groups.
- **Differences in respondents' average opinions on healthcare providers' performance attributable to personal variables (gender, age, educational qualification, years of experience, and job title)**

Examining whether healthcare providers' performance differs according to personal variables is essential to identify groups that may require additional support, training, or resources. Personal characteristics such as gender, age, educational qualification, years of experience, and job title can influence professional behavior, efficiency, decision-making, and overall performance, particularly in challenging environments such as crisis-prone healthcare facilities in Palestine. Understanding these differences can help policymakers and hospital administrators design targeted interventions to enhance performance across all staff categories.

ISSN: 2410-7727

Based on the research question, the hypothesis can be formulated as follows:

H_0 (Null Hypothesis): There are no statistically significant differences in healthcare providers' performance based on gender, age, educational qualification, years of experience, or job title.

H_1 (Alternative Hypothesis): There are statistically significant differences in healthcare providers' performance based on gender, age, educational qualification, years of experience, or job title.

To test the hypothesis, appropriate statistical analyses should be applied depending on the type of personal variable: Gender (categorical, two groups) – Use Independent Samples t-test to compare mean perceptions between male and female respondents. Age, Educational Qualification, Years of Experience, Job Title (categorical with more than two groups) – Use One-Way ANOVA to compare mean perceptions across different categories (e.g., age groups, education levels, job titles).

Table 4.8: Differences in Respondents' Average Opinions on Healthcare Providers' Performance by Personal Variables

Variable	Class	Mean	STD	Test statistic	*P*-value
Gender	Male	3.04	0.50	T= 1.511	0.133
	Female	3.19	0.54		
Education Level	Diploma	3.37	0.31	F=3.171	0.045
	Bachelor	3.05	0.52		
	Postgraduate	3.01	0.52		
Age	Less than 25 years	3.34	0.25	F=1.385	0.250
	25 to less than 35	3.02	0.49		
	35 to less than 45	3.18	0.49		
	45+	3.01	0.56		
Job title	Physician	2.98	0.49	F=1.213	0.307
	Pharmacist	2.99	0.46		
	Nurse	3.12	0.46		
	Medical Assistant	3.20	0.71		
Years of experience	Less than 5	3.42	0.53	F=2.576	0.057
	5 to less than 10	2.89	0.46		

ISSN: 2410-7727

Variable	Class	Mean	STD	Test statistic	*P*-value
	10 to less than 15	3.13	0.50		
	15+	3.08	0.51		

Understanding how personal characteristics influence healthcare providers' performance is essential for designing targeted interventions and support programs, especially in challenging environments like Palestinian hospitals. In this study, differences in perceived performance were examined across five personal variables: gender, educational level, age, job title, and years of experience. The analysis revealed that, overall, most personal variables did not produce statistically significant differences in performance perceptions. However, educational level was an exception, with diploma-holders reporting higher performance compared to those with bachelor's or postgraduate degrees. Minor trends were observed for age and years of experience, where younger or less experienced staff tended to report slightly higher performance, but these differences were not statistically significant. Gender and job title showed no notable impact on performance perceptions, suggesting a relatively uniform experience across these groups. These findings highlight that, in the Palestinian healthcare context, systemic and environmental factors such as resource constraints, high patient loads, and crisis-related pressures may play a larger role in shaping perceived performance than individual demographic or professional characteristics.

- **Gender:** the mean performance score for males (3.04) and females (3.19) shows a slight difference, with females reporting marginally higher performance. However, the t-test ($T = 1.511$, $p = 0.133$) indicates that this difference is not statistically significant. This suggests that both male and female healthcare providers perceive their performance similarly in Palestinian hospitals, reflecting the shared exposure to high patient loads, resource constraints, and crisis situations. This finding aligns with previous studies (Hamdan, 2020; Abu-Saad et al., 2019), which found no significant gender differences in perceived professional performance in conflict-affected healthcare settings.
- **Educational Level:** Performance means varied slightly across diploma (3.37), bachelor (3.05), and postgraduate (3.01) qualifications. ANOVA results ($F = 3.171$, $p = 0.045$) indicate a statistically significant difference. This suggests that educational qualification may influence perceived performance. Specifically, staff with diploma level education reported higher performance than those with bachelor or postgraduate degrees. In the Palestinian context, this may be explained by the distribution of job roles: diploma holders often serve in hands-on, operational positions (e.g., nurses or medical assistants), where performance is more directly observable and task-focused. Similar findings were reported by

ISSN: 2410-7727

Al-Husseini (2018), where less formally educated but experienced staff sometimes reported higher efficiency in routine tasks.

- **Age:** Mean scores across age groups ranged from 3.01 (45+ years) to 3.34 (<25 years), with ANOVA ($F = 1.385$, $p = 0.250$) indicating no significant differences. Although younger staff reported slightly higher perceived performance, this difference is not statistically significant. In the Palestinian context, performance perceptions appear consistent across age groups, likely because all staff face similar operational pressures and organizational constraints (Hamdan, 2020).
- **Job Title:** Mean performance scores varied from 2.98 (physicians) to 3.20 (medical assistants), with ANOVA results ($F = 1.213$, $p = 0.307$) indicating no significant differences among job roles. This suggests that perceived performance is relatively uniform across professions. All healthcare staff, regardless of role, operate in high-stress, resource-limited environments in Palestine, which likely standardizes perceptions of performance (Abu-Saad et al., 2019).
- **Years of Experience:** Mean scores ranged from 2.89 (5–10 years) to 3.42 (<5 years), with ANOVA ($F = 2.576$, $p = 0.057$) approaching significance but not crossing the conventional threshold. Although not statistically significant, there is a trend where staff with fewer than five years of experience reported slightly higher perceived performance. This may reflect a higher level of motivation, enthusiasm, or confidence among newer staff, whereas more experienced staff may be more critical of their performance. This trend is similar to observations in prior studies (Al-Husseini, 2018), which suggested that experience influences self-evaluation but does not always produce significant differences in perceived performance.
- **Overall,** the findings suggest that educational qualification is the only personal variable showing a statistically significant effect on perceived healthcare performance, with diploma-level staff reporting higher scores. Other variables gender, age, job title, and years of experience do not significantly affect perceptions of performance. This indicates that in the Palestinian healthcare context, systemic factors such as resource availability, crisis conditions, and operational pressures may have a stronger influence on performance perceptions than personal demographic or professional characteristics.

ISSN: 2410-7727

-Results and Recommendations

Level of Crisis-Related Challenges

1 The overall level of crisis-related challenges was **high** across the measured dimensions.

2 The most prominent challenges included:

2.8 Severe shortages of medical supplies and essential resources.
2.9 Overcrowding in hospital departments.
2.10 Increased workload and extended working hours.
2.11 Elevated levels of psychological stress.
2.12 Noticeable levels of occupational burnout among healthcare providers.

2. Level of Healthcare Providers' Performance

- Despite the severity of crisis exposure, the overall performance level ranged between **moderate and high** across several dimensions.
- The strongest performance indicators were observed in:
  - Professional commitment and ethical responsibility.
  - Emergency responsiveness and crisis handling capacity.
  - Continuity of care under resource-constrained conditions.

3. Relationship Between Crisis Challenges and Performance

- The analysis revealed a **statistically significant inverse relationship** between crisis-related challenges and healthcare providers' performance.
- As the intensity of crisis challenges increased, performance levels declined, particularly in:
  - Service quality indicators.
  - Response efficiency and operational speed.
- Nevertheless, some performance dimensions remained at a moderate level, reflecting:
  - Professional resilience.
  - Accumulated field experience.
  - Strong humanitarian motivation among healthcare workers.

4. Interpretative Implications

- The ability to maintain moderate to relatively high performance under extreme pressure demonstrates considerable adaptive capacity among healthcare providers.

ISSN: 2410-7727

- However, the sustained presence of high-level challenges without adequate structural and institutional support poses a risk of gradual performance deterioration over time.

5. Practical Implications

The findings emphasize the necessity of:

- Strengthening human and material resources.
- Developing and institutionalizing effective emergency preparedness plans.
- Providing continuous psychological and social support for healthcare workers.
- Enhancing organizational resilience mechanisms to safeguard service quality.

Such measures are essential not only to mitigate the negative impact of crisis challenges but also to elevate performance from moderate to consistently high levels, thereby ensuring the sustainability and quality of healthcare delivery in future crisis scenarios.

1.1 Recommendations

In light of the theoretical framework, previous literature, and the empirical findings of the present study which revealed a high level of crisis-related challenges and a statistically significant inverse relationship between crisis intensity and healthcare providers' performance the following recommendations are proposed:

1.1.1 Recommendations related to the independent variable (Crisis Challenges)

Given the high level of crisis-related pressures identified in the study, the following structural and strategic interventions are recommended:

1. Institutionalizing Strategic Crisis Management Planning

Develop comprehensive long-term strategic plans for crisis preparedness, incorporating scenario-based forecasting, risk mapping, and continuity-of-care protocols to enhance institutional resilience.

2. Promoting Research in Crisis Management

Encourage healthcare professionals and administrative leaders to engage in applied research related to crisis preparedness and response, thereby fostering evidence-based decision-making within hospital systems.

3. Learning from Comparable Regional Experiences

Establish structured mechanisms to benefit from neighboring countries that operate under similar geopolitical or resource-constrained conditions, particularly in the areas of emergency coordination and workforce sustainability.

ISSN: 2410-7727

4. Strengthening Governance Structures for Crisis Management

Advocate for the establishment or reinforcement of an independent crisis management unit within the Ministry of Health, equipped with clear authority, operational autonomy, and specialized expertise to address systemic vulnerabilities in the Gaza Strip.

5. Allocating Dedicated Crisis Budgets

Secure independent financial allocations specifically designated for emergency preparedness, essential medical stockpiles, and rapid response infrastructure to mitigate resource-related disruptions during crises.

6. Capacity Building for Supervisory and Leadership Roles

Implement targeted training programs for supervisory and managerial staff focused on crisis leadership, adaptive decision-making, stress management, and coordination under high-pressure conditions.

1.1.2 Recommendations related to the dependent variable (The performance of healthcare providers)

Considering that performance levels remained moderate despite severe pressures yet declined with increasing crisis intensity the following workforce-focused interventions are recommended:

1. Inclusive Decision-Making Structures

Involve multiple administrative and professional levels in institutional decision-making processes to enhance organizational commitment and collective ownership of crisis response strategies

2. Enhancing Cognitive and Managerial Competencies

Provide continuous training programs in strategic thinking, problem-solving, and administrative innovation to strengthen adaptive performance during emergencies.

3. Addressing Employee Motivation and Professional Needs

Integrate healthcare providers' motivational drivers, professional concerns, and well-being considerations into administrative planning to maintain morale and reduce performance deterioration.

4. Institutionalizing Psychological Support Systems

Establish structured psychological support services, including counseling programs, peer-support mechanisms, and stress reduction initiatives, alongside fair reward and recognition systems to sustain professional engagement.

ISSN: 2410-7727

5. Continuous Performance Monitoring and Feedback Integration

Conduct periodic performance assessments and job satisfaction evaluations, while systematically incorporating patient feedback to improve service quality and response efficiency.

1.1.3 Recommendations for further studies

To extend the scientific contribution of this study, the following research directions are proposed:

1. Employing Alternative Research Designs

Future studies should utilize longitudinal or mixed-method approaches to capture performance dynamics over time and provide deeper causal insights.

2. Exploring Additional Variables

Investigate moderating or mediating variables such as organizational resilience, leadership style, institutional trust, or perceived safety to better understand performance variability.

3. Linking Theory with Field-Based Interventions

Conduct applied studies that evaluate the practical effectiveness of crisis management interventions within hospital environments.

4. Enhancing Crisis Communication Research

Examine strategies for improving communication channels among hospital departments, healthcare teams, patients, and media outlets during crises to reduce misinformation and enhance coordination.

5. Evaluating Leadership Development Programs

Undertake empirical studies assessing the effectiveness of leadership development programs in strengthening crisis preparedness and sustaining workforce performance under prolonged stress conditions.

These recommendations are associated with the study's findings, which demonstrate that while healthcare providers exhibit notable resilience, sustained exposure to high-intensity crisis challenges without adequate institutional reinforcement may compromise long-term performance stability. Accordingly, strengthening both structural preparedness and workforce support mechanisms is essential to ensuring the sustainability and quality of healthcare services in fragile and conflict-affected settings.

ISSN: 2410-7727

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العام	2021	2022	2023	2024	2025
معامل أرسيف	0.2692	0.1954	0.3759	0.3068	0.5978
معامل التأثير العربي	1.60	1.73	1.25	1.55	1.59