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# THE ROLE OF CRISIS MANAGEMENT IN IMPROVING THE QUALITY OF HEALTH SERVICES PROVIDED TO PATENTS AT THE UNIVERSITY HOSPITAL OF TLEMCEN

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## **Abstract**

Abstract: The main objective of this research is to identify the role of crisis management in improving the quality of health services. In order to achieve the objectives of the research, we used the descriptive analytical approach to study the role of crisis management in improving the quality of health services provided to patients at the University Hospital of Tlemcen by distributing questionnaires to 50 individuals. Highly rated. The average arithmetic role of employees towards improving the quality of health services received a relative weight of (70.88%) And it came to a great extent.

Keywords: Crisis Management; Quality of Health Services; Tlemcen University Hospital;

### 1.0 INTRODUCTION

Most health facilities are trying to apply crisis management systems, due to multiple and persistent pressures from the internal and external environment on these facilities. For example, health facilities face increasingly high costs of medical equipment and equipment, increased competition among similar health facilities, lack of explicit and objective standards and standards to assess the efficiency and effectiveness of both administrative and clinical performance, and an increase in the proportion of legal complaints against the hospital due to medical malpractice, increased awareness among service users and increased interest in quality. Therefore, these facilities seek to improve their performance and maintain their management and clinical reputation by taking care of the quality of care and health service provided in crises.

Health facilities that implement a crisis management system are characterized by the fact that their decisions are based on facts and correct data and not just individual speculation or expectations based on personal opinions. From this point of view, the use of scientific tools and statistical tools available to apply the concept of comprehensive quality is one of the most important

pillars of the comprehensive quality management system where multiple statistical tools are used in order to obtain accurate results, as well as to identify the level and degree of deviation in health institutions.

# 2.0 Search problem:

The search problem can be formulated according to the following main question:

What is the role of crisis management in improving the quality of health services provided to patients at Tlemcen University Hospital?

This chair question is branched out by a set of subquestions:

- 1. What is the level of enabling crisis management at Tlemcen University Hospital?
- 2. What is the quality of health services at Tlemcen University Hospital?
- 3. What is the relationship between crisis management and the quality of health services?
- 4. Is there a statistically significant relationship in the responses of the sample members to the direction of the study variables depending on demographic variables (type, age, scientific qualification, job title)?

# 3.0 Study Hypotheses:

H1: there is no statistically significant relationship at the level of significance ( $a \ge 0.05$ ) between crisis management and improving the quality of health services in the University Hospital of Tlemcen.

The following hypotheses are branched out:

- 1. There is no statistically significant relationship at the level of significance between early warning and improving the quality of health services at the University Hospital of Tlemcen.
- 2. There is no statistically significant relationship at the level of significance between readiness and improving the quality of health services at the University Hospital of Tlemcen.
- 3. There is no statistically significant relationship at the level of significance (a 0.05 ≥) between containing damage and improving the quality of health services in the University Hospital of Tlemcen.
- 4. There is no statistically significant relationship at the level of significance (a 0.05 ≥) between restoring activity and improving the quality of health services in the University Hospital of Tlemcen.
- 5. There is no statistically significant relationship at the level of significance between learning and improving the quality of health services at the University Hospital of Tlemcen.

H2: there are no statistically significant differences at the level of significance (a  $0.05 \ge$ ) in the response of the sample members according to demographic variables.

# 4.0 Study Objectives:

The main objective of this research is to identify the role of crisis management in improving the quality of health services.

The following sub-objectives are branched out:

- 1. Identify the level of crisis management in improving the quality of health services at the University Hospital of Tlemcen.
- 2. To reach out to the nature of the relationship between crisis management and improving the quality of health services at the University Hospital of Tlemcen.
- 3. Identify the statistically significant relationship in the response of sample members to study variables depending on demographic variables (type, age, scientific qualification, job title).

### 5.0 Importance of Study:

- 1. The importance of research is the importance of the society to which the study will be applied.
- 2. The importance of research is the importance of health services for citizens.
- 3. The importance of research is the importance of administrative aspects in health institutions such as crisis management.
- 4. The importance of research is that it addresses a problem that needs to be identified, known and its dimensions, which is to improve the quality of health services.

### 6.0 Previous studies:

(Al-Araji and Daqassema Study, 2000) entitled :Crisis Management: A Field Study of the Availability of Crisis Management Elements from the Point of View of Supervisory Staff in the Greater Amman Secretariat'[1]

This study aimed to identify the trends of individuals towards the availability of a crisis management system in its different stages individually and collectively in the Greater Amman Secretariat, in order to determine the readiness and readiness enjoyed by this institution in dealing with crises, as well as to determine the extent of the relationship between the stages of the crisis management system together.

The researcher used the method of field study based on questionnaires designed to collect preliminary data by members of the study community, which consists of all workers in supervisory positions of the level (director of department and region and head of department) in the Greater Amman Secretariat, and all members of the study community were selected from the directors of departments and regions and heads of departments (287) and the number of questionnaires recovered (238) questionnaires was selected.

The study found a set of results, the most important of which was: the study revealed a defect in the crisis management system, where it was found that there was a discrepancy in the availability of the basic elements of successful crisis management in the five phases of the system, which represented the integrated perspective of crisis management, and the degree of availability of these elements to a higher degree in the operational and therapeutic stages (containment of damage and recovery) than in the preventive and planning stages (signal detection, readiness and prevention, learning) which means that crisis management efforts in the Greater Amman Secretariat are efforts Therapeutic and reaction to the different crises that occur and to a greater extent as preventive efforts and preparedness for possible crises.

The researcher made a series of recommendations, the most important of which are: working to balance the crisis management system by activating or increasing the provision of the basic elements of successful crisis management, and taking care of management training aimed at developing and establishing management skills and behavioural capabilities for crisis management.

(Al-Ammar Study, 2003) entitled The Role of Information Technology and Systems in Crisis and Disaster Management (Applied Study to the Directorate General of Civil Defense). [2]

This study aimed to identify the role of information technology and information systems and their various applications in the management of crises and disasters using the latest administrative thinking in the field of information and communication flow systems,

and to take advantage of modern technologies in the field of computer and the use of the speed, accuracy and high efficiency of the computer in the construction of decision support systems and expert systems to provide support to decision makers in the event of a crisis or disaster so that it can manage and contain it as efficiently and effectively as possible and in the shortest time. The researcher selected the study community of officers working in the General Directorate of Civil Defense, who work in the approximate number of departments related to crises and disasters (480) individual, where the researcher distributed a total of (300) questionnaires to a random sample of this number, i.e. (62.5%) From the study community in five departments of the Directorate General of Civil Defense, the questionnaire was distributed in varying proportions.

The study has reached many important conclusions:

- The use of information technology and systems saves time, effort and speed of work in a timely manner during crises and disasters and timely decision-making.
- The most important factors that help to deal with crises and disasters efficiently and effectively is the existence of rules and regulations that define roles in the face of crises and disasters and the clarity of specific objectives.
- The most important factors that help to deal with crises and disasters efficiently and effectively is the existence of rules and regulations that define roles in the face of crises and disasters, and the clarity of the specific objectives.
- One of the main factors impeding performance in the face of crises and disasters is the inaccuracy in setting targets, and insufficient human and material resources and resources.
- One of the most important solutions that the study sample members believe to help avoid or limit the constraints of using technology and information systems to deal with various crises and disasters is the existence of a good and integrated information and communication system, and the existence of special programs to train workers in the use of information technology and information systems to respond to crises and disasters.

# (Al-Hawama study, 2003) entitled: Crisis Management from the perspective of the case study approach (Jordan Cooperative Organization: Analytical Descriptive Study) [3]

This study aimed to analyze the axes of the crisis experienced by the Jordanian Cooperative Organization, the study began to identify the concept of crisis management as a modern administrative dimension and the causes of the crisis and its roots in the Jordanian cooperative organization and the Jordanian experience and its strategy in dealing with crises, and finally the crisis and obstacles that hindered access to solutions to this crisis, and propose an

integrated model to deal with the crisis of the cooperative organization. To achieve the objectives of the study, the case study approach was used to understand the root of the problem experienced by the organization and its contribution to the shaping of the situation in its current state.

The study has reached the following conclusions:

- The seeds of the crisis in the Organization were born with its inception, and this crisis has matured in it because of the accumulation of certain dimensions, the legislative, financial and administrative dimensions, and the crisis has had negative and devastating effects on the Organization, especially on the functional side.
- All the solutions developed by the Organization to deal with the crisis were not satisfactory, temporary and partial and did not end the crisis.

The organization did not deal with the crisis in an orderly scientific manner, but it dealt with it in a traditional manner and at some stages the Organization denied the crisis and ignored it and claimed the integrity of the situation and the result was to exacerbate the crisis rather than resolve it.

• The study recommended the need to create taskforce task force and highly qualified task force and acquire its members certain characteristics, abilities and skills that correspond to the needs of dealing with the crisis of the employees of the cooperative organization, and this team must move away from all the traditional random methods in dealing with the crisis and build all the cooperation of the team on sound scientific bases, as recommended the study that the team should give a very short time to deal with the crisis because crises need to be quick in dealing.

# 7.0 Theoretical Background:

# i. Crisis management:

The management is part of the human heritage accumulated through different ages, and its origin has been associated with the presence of man on this earth, and it has become indispensable in coexistence with others by organizing their collective efforts to meet their needs and achieve their goals, hence the need for man to manage, which has become the auxiliary element that permeates all aspects of human activity.

However, the importance of management in the modern era has increased because it plays an important role in the success or failure of society's institutions of different types and purposes. No business or institution can succeed without successful management, as management is the tool in guiding states and peoples to achieve their goals in the present and the future, especially in light of the rapid changes resulting from the use of technology towards specialization. During his life through different ages,

man faced many crises that threatened his life and affected his destiny and future.

# ii. The concept of crisis management:

The government's policy of "eliminating the "state of the environment" is a key issue for the government.

Crisis management is one of the sciences of the future and the science of adapting to variables, and the science of the movement of constants and forces of action in all human areas, whether political, social, educational, or other, and thus independent science itself, at the same time connected to all other humanities takes and adds to it the new that it needs .[4]

The progress of management science has created new knowledge branches, such as crisis management, especially in the light of scientific and technological advances, under which man has become able to cause disasters beyond natural disasters and the impact of man-made disasters has become more widespread than natural disasters, as may affect the whole world, unlike natural disasters, which are often confined to a single society.[5]

Crisis management is the management of the future and the present, it is a rational scientific department based on science and knowledge and works to protect and control the institution and improve its performance and maintain the safety of its workers and to address any deficiencies or defects affecting one of its sectors or address any cause that may cause the beginnings of a future crisis, and thus the institution retains its vitality and continuity.[6]

The method of crisis management can be used in the field of education, especially since the aspects of the crisis in education are multiple and require decisive and successful solutions as a necessary condition to enable them to have positive effects on the formation of the citizen, since it is the building of a human being that drives life on the homeland from efforts and monotony to vitality and liberation, and from following and obeying innovation and creativity. [7]

There are many definitions of crisis management, some of which we will mention:

•Steven Fink defined it as: 'The ability to remove a lot of risks and uncertainty to gain the greatest control over the destiny of the organization, which means using imagination to view the worst that can happen, and then evaluate alternative decisions before they happen[8]'.

It is known (Al-Hamawi, Sharif) as: 'The ongoing administrative process that is concerned with forecasting various crises by sensing and monitoring internal and external environmental variables generating crises, mobilizing the resources and possibilities available to prevent or prepare to deal with crises as efficiently and effectively as possible and to achieve the least possible harm to the organization,

the environment and workers, while ensuring that normalcy returns to normalcy as quickly and at the lowest possible cost and studying the causes of the crisis to draw results to prevent them or improve their future treatment with the organization of the resulting benefits. As far as possible [9]:

•Al-Hawiti knew it as:'It represents a framework that is useful in examining and understanding sudden and unexpected situations, which carry with them severe pressures, rejection and demolition of the existing system, it is a stand-by management approach to deal with the circumstances of crises, under which they are prepared or prepared, and planning to respond to them is based primarily on the predictive ability to anticipate crises in their forms, sizes and times, their occurrence and where they occur, and to develop complete plans for the expected crises [10] '.

Littejtohn defines it as: 'A system used to deal with crises in order to avoid them, to plan for unavoidable situations, and to make preparations for predictable crises, a system applied to deal with these situations when they occur emergency for control.'[11]

# iii. Crisis strategies:

There are two types of strategies[12]:

- \* Traditional strategies: they have been used through the dhows and have proven to be very successful, and organizations and countries have become accustomed to using them.
- \* Modern strategies: they emerged due to the nature of modern developments, some of which were discovered as a result of scientific development and research.

# First: Traditional strategies:

Many strategies have been used throughout the various ages historically, militarily and economically, and have been tested and validated.

- Denial: It refers to the refusal to acknowledge the existence of a defect or crisis, but even to the media blackout of the situation. When the administrative system is dictatorial authoritarian, it tends to be sensitive to any criticism or blame, and to preserve the gains of the system, managers tend to deny, remain and obfuscated, claim the integrity of the situation and the efficiency of the administrative system, that it is 'not more than possible', and that the system is prosperous and prosperous. When justification is asked for, justification refers to the existence of: enemies of success, there are hateful forces, some working in the dark, and there are hidden hands working against a successful regime.
- 2. Suppression: It refers to a violent, open and open clash with the forces of crisis and therefore it is the opposite of ideas and when a violent clash takes place is mainly with the two engines of this crisis

- and liquidated and the two engines of the crisis are liquidated. The authoritarian regime resorts to the suppression stage only when the crisis reaches the stage of threat and direct threat to the organization's being, and at this time the organization must maintain its survival against others through violence, suppression and liquidation.
- 3. Suppression: It is a violent, swift and secret move against the forces of crisis with the aim of destroying and suppressing the key elements driving the crisis, a strategy that indicates that the organization used for it is as tyrannical and authoritarian as in the previous two strategies.
- 4. Isolation: It refers to the organization's removal from the crisis situation and in this situation the two main drivers are identified and isolated geographically, physically and psychologically from the events of the crisis itself. The crisis's main makers and drivers are usually targeted and isolated from the rest of the crisis, who are in favour of or are interested in the crisis, until the crisis is destroyed.
- 5. Venting: It refers to calming the crisis by creating side openings in the crisis to relieve the pressure, tension and conflict within the crisis and prevent it from exploding. This method is also known as volcano venting. This method is characterized by some democracy, with the causes and supporters of the crisis expressing their opinions and through multiple and lengthy discussions the intensity of the discussions subsides, the crisis subsides, anger is reduced, and the angry volcano is vented before it gets bathed.
- 6. Understatement: Here the organization recognizes the crisis but underestimates it as a 'whirlwind in a cup', that it is simple and under control, that it is not important and unsettling and that the causes of the crisis will be dealt with in appropriate ways for the circumstances, causes and engine of the crisis. This method is effectively useful in simple, limited and partial crises, and also when management is able to remedy it after underestimating it and reducing its size.
- 7. Branching: Is a sharp and violent confrontation with the drivers of the crisis and its supporters, in order to identify how difficult the engines and supporters are. This is followed by negotiating with each branch of the crisis after dividing the previous form, trying to absorb their anger, attracting their inclinations, and convincing them appropriately for each branch, type or method of crisis (and each sheikh has a way).

# Second: Modern strategies:

The development of administrative, economic, military, intelligence and social sciences has led to more modern and modern strategies for addressing crises, problems and disasters.

- 1. Teams: If the crisis is multifaceted (productivity, marketing, human, financial, political, and legal), there must be specialized persons in each of these aspects, and each has its say in trying to resolve the crisis. When confronted with the complex problem, these specialists are presented with their scientific vision to face their own part, leaving nothing to the diligence and coincidence. The crises faced by organizations have become of many dimensions, as a single problem or crisis has health and medical aspects, police-related aspects, legal aspects, aspects of technical losses, material losses, with implications for production, human resources and others. This makes the composition of task forces necessary and desirable for decision makers.
- 2. Democratic participation: This method is used when the nature of the crisis is dominated by the human aspect, in an environment that favours political and economic freedom, and in an organization whose members respect the high manager who will lead the administrative democracy between him and the workers. It begins with an explicit declaration of the crisis, its depth, its limits, its seriousness, the steps taken to resolve it and the remaining steps to reach the right solution.
- 3. Tactical Reserve: This method has been taken from military preparation sciences, procurement and warehouse management sciences and material management in the administrative field, where a safe reserve or a 'safety limit' of materials and materials is required in the event of delays in supply from suppliers. Organizations should therefore follow the same idea if the lack of materials and labour requirements posed a risk to continued production or work or might shake the organization's entity.
- 4. Phantom abundance: When the crisis is linked to catastrophic aspects of food and money, the state has to face a catastrophic situation by providing these materials more than is required.
- 5. Escalation: It is to let the crisis or conflict increase and rage, especially when there are different parties to political or ethnic interests or background, especially in popular and political action, and in local councils, municipalities and political parties, and escalate so that the debate reaches the point (or points) of conflict, conflict and conflict.
- 5. Fragmentation: It refers to the fragmentation of the crisis into a set of smaller, smaller, less errant and simpler crises. When there is a major crisis that threatens the entity of the organization, such as the strike of all employees of a company, the problem can be pieced out by identifying the parties causing and supporting the crisis, identifying their demands, and then dealing with each party individually. In the event of a strike, the small workers can be dealt with alone and

independently of another group, such as employees, as well as supervisors, each party has its needs and demands from the rest of the parties, and the problem of the general strike can be addressed by starting to discuss each group individually. Here, the crisis could be broken down into small crises that could be dealt with.

- 7. Discharge: The crisis arises for certain reasons and if the crisis loses these causes it is over and 'nothing is lost' and does not give it. In this way, officials need to know the substance and causes of the crisis. It usually begins with the recognition of a crisis, by approaching the drivers and supporters of the crisis, and then, of course, starting with the right people in this dialogue. The clergy are able to convince the drivers of crises with a religious background. Little by little, the drivers of the crisis are being persuaded by their religious, cultural, political or economic mistakes. This is where the crisis has become vicious (i.e. without) its causes, and thus ends quickly.
- 8. Turning the course of the crisis: When a crisis becomes an evil that threatens the entity of an organization or state, it may be difficult to confront, but it can be prudently financed into another area and perhaps something productive and effective. It begins with recognizing the problem, identifying its causes, understanding its consequences, knowing the nature of its drivers, developing a strategy to convince, attract and read them to transform their destructive abilities into other paths, and can even turn them into positive and creative paths.
- 9. Containment: This method relies on understanding, discussing and negotiating with the crisis drivers in a timely manner, and misses the opportunity for any third party that wishes to destroy the organization, threaten its entity, and deal with trade unions is the best example of a containment strategy. It depends on trapping the crisis, confining it to the apparent engines, absorbing their anger and listening to their demands.

Destruction of the crisis: This method is also called the internal explosion of the crisis or the direct clash. It is used when the Organization sees that there is a destructive and threatening state of the Organization and that is where the organization resorts to internal explosion of the elements and engines of the crisis

# 8.0 Improving the quality of health services:

# iv. Concepts of quality of health services:

The concept of quality of health services: The concept of the quality of health services is a vague concept that is difficult to define and accurately measure.

• There is no general agreement among those interested in this subject on a common and

acceptable standard definition, as each of them views this concept from a certain angle and therefore deals with it and focuses on points where it may differ with others[13]

The quality of the health service from a professional and medical perspective is to provide the best services according to the latest scientific and professional developments and is controlled by the ethics and quality of the practice of the profession and the nature of the health service provided, but from the administrative perspective means how to use the available and available resources and the ability to attract more resources to cover the needs to provide a distinguished service, but from the patient's point of view, which is more important, the quality of the health service means the way it is obtained and its final outcome [14]

- Quality from doctors' point of view may mean the highest possible level of medical knowledge and skills and its provision to serve their patients[15]
- It is defined by (Al Bakri, 2005) as the degree that the patient sees in the health service provided to him and what can be overdone compared to what is expected[16].
- It is also known as the application of science and medical technologies in a way that maximizes public health without increasing risk exposure[17]
- The quality of health services has been defined as two axes, a technical and a humanitarian hub, and the technical focus includes the application of medical and health science in diagnosis and treatment, while the humanitarian focus involves meeting the patient's human needs, such as empathy, respect and providing the necessary information [18]
  - While viewed from the following angles:
- Patient: The hospital provides compassionate and respectful treatment.
- The Doctor: Put the most advanced knowledge, science and medical skills in the service of the patient.
- Owners: Get the best workers and the best facilities to provide service to customers. Hospital management: achieving efficiency in the provision of service.

In a socially-sensitive definition, it can be said that it is an expression of the health unit's responsibility as a producer towards the rights of patients, and in its content it refers to the social responsibility of the health unit, which whatever its form and functions and as a producer of the health service provided to the community in order to fulfil its obligations towards patients, their care and their health safety[19]

Dimensions of the quality of health services:

(Zeithaml and Bither, 2000) [20] , (Gronroos, 1984) [21] , (Cronin and Tylor, 1992) [22] , and a set of standards that use quality guidelines and standards have been developed [23] :

1. Reliability: Refers to the ability of the service provider to perform the service promised in a reliable manner and also with a high degree of accuracy and

accuracy, the client expects to provide him with a precise service in terms of commitment to time, promise and performance just as it has been done.

- 2. Availability and accessibility: relates to the ability and ability of the organization to answer the following questions and targets and to know how important it is from the point of view of the beneficiary patients:
- Is the service available at the time the customer wants?
- Is the service available where the customer wishes?
- Will the customer receive the service when it is requested?
- How long does it take for the customer to wait for the service?
  - Is it easy to get to the service place?
- 3. Security: Used as an indicator of the degree of security and confidence in the service provided and its provider, i.e. related to the extent of the risk of receiving the service from this organization or its provider or both.
- 4. Credibility: How reliable is the service provider, is it trustworthy, what is the credibility of the service provider? Does he keep his promises and what he says? Knowledge and awareness indicate the extent to which the service provider is able to identify, care and understand the needs of patients and provide them with care and care.
- 5. Response: Relates to the ability, willingness and willingness of service providers to be permanently in customer service and their ability to serve them when they need it, does the service provider feel happy and excited in the service of the customer? Does the service provider have the readiness to provide the service when requested?
- 6. Competence and merit: Related to the adequacy and merit of service providers in terms of skills, analytical abilities, inference and knowledge that enable them to perform their roles optimally, and in the case of dealing with the service provider for the first time, the client usually resorts to such criteria as scientific certificates and their sources, practical experiences and locations, some patients may prefer to receive their services from people with high educational levels and from accredited and official sources.
- 7. Concrete aspects: Refers to the appearance of the physical facilities available to the service organization and equipment and the appearance of individual customers and tools and means of communication with them such as the technology used to provide service, interior appearance, design and décor of the shop as well as the personal appearance of the employees.
- 8. Communications: Relates to the ability of the service provider to explain the characteristics of the service to the customer and the role that the customer must play to obtain the required service.

The government's policy of reducing the number of women in the civil service is a matter of concern.

While (Diop and Attia, 2005) presented a number of criteria [24]:

- Technical ability: means skills, abilities and the level of actual performance of the manager and service provider.
- Easy access to the service: that is, the medical service provided must not be restricted, but is easily accessible, close and accessible.

Effectiveness: the effectiveness and impact of the services provided and their scientific reliance, and the provision of appropriate technology that takes into account the circumstances and potential risks.

- The relationship between individuals: it means interaction between health providers and beneficiaries, as well as between the health team and the community as a whole so that relationships are good, including responsiveness, empathy, good listening and mutual respect.
- Sufficiency: Means providing the necessary and appropriate services on sound grounds and standards.

Continuity: Non-stop or non-stop services.

- •Safety and safety: Minimize Risk, including health provider and patient.
- Luxuries: Service specifications that help satisfy patients and satisfy their desires, means comfortable waiting rooms and curtains in medical screening rooms that keep the patient's secrets and privacy

## v. Tlemcen University Hospital:

Construction of the Tlemcen Civil Hospital began in 1947 and was completed in 1954. It was the colonial hospital of the city of Tlemcen. Upon independence, it is the health sector and the university in Tlemcen/Sbadado.In 1986, it was established as a university hospital center by Executive Decree No. 86.306 of December 16, 1986. Takes the name of Dr. Tijani Damraji, doctor, patriot of the first hour, martyr of the Algerian revolution, fell in the field of honor on April 17, 1957.

### 9.0 METHODOLOGY:

### I. Research Methodology:

In order to achieve the objectives of the research, we used the descriptive analytical approach to study the role of crisis management in improving the quality of health services provided to patients at the University Hospital of Tlemcen by distributing questionnaires to 50 individuals, in which it tries to describe the phenomenon in question, analyze its data, and the relationship between its components, opinions about it, the processes it contains and the effects it brings.

# II. Sources of Data:

We have used two basic sources of information:

.1Secondary sources: We went on to address the theoretical framework of research to secondary data sources, which are related Arabic and foreign books and references, periodicals, articles and reports, researches and previous studies that dealt with the subject of research, and reading in various internet

2. Primary sources: To address the analytical aspects of the research topic, we have resorted to collecting raw data through the questionnaire as a main research tool, specifically designed for this purpose.

# III. Community:

It is known as all the vocabulary of the phenomenon that we study and the research community consists of all the staff at the University Hospital of Tlemcen.

# IV. Sample:

sites.

The search sample was randomly selected from the search community and numbered (50) employees, and we recovered from the distributed search tool (45), or 88%.

# V. Description of demographic characteristics and data:

Table [1] shows the distribution of the search sample by demographic data:

- \* Type: 34.29%) Of the research sample, they are of the male sex, and 65.71% are male. They are of the female sex, and the majority in distribution came in favor of females.
- \* Age: 25.71%) They are 21-30 years old, similar to the age range of 31-39 years, and (42.86%) They are 40-49 years old, 5.71% They are aged between 50 and 59 years.
- \* Scientific qualification: 40.0%) They hold a university degree (diploma), and 48.57% of them are They hold a bachelor's degree, 5.71%) They hold master's and doctoral degrees.
- \* Job title: 34.29%) They are administrators, and 28.57% They are nurses, 22.85% They are doctors, 14.29% They're department heads

Table (1).Distribution of search sample by demographic data

| Variable    | Variable<br>classification |                | Number | Parentage% |
|-------------|----------------------------|----------------|--------|------------|
| Gender      |                            | Male           | 17     | 34.29      |
|             |                            | Female         | 33     | 65.71      |
| Age         |                            | 30-21year      | 11     | 25.71      |
|             |                            | 39-31year      | 11     | 25.71      |
|             |                            | 49-40year      | 23     | 42.86      |
|             |                            | 59-50year      | 5      | 5.71       |
| Scientific  |                            | Bachelor       | 17     | 40.0       |
| qualificati |                            | Diploma        | 19     | 48.57      |
| on          |                            | Master         | 7      | 5.71       |
|             |                            | Doctor         | 7      | 5.71       |
| Job title   |                            | Administrative | 21     | 34.29      |
|             |                            | Nurse          | 14     | 28.57      |
|             |                            | Doctor         | 10     | 22.85      |

Head of 5 14.29

Total 100

# VI. Study Tool:

The study is used the questionnaire as a tool to collect primary data. It was designed as follows:

- The first part: includes the personal and functional characteristics of the sample members, and it includes: college, educational degree, years of experience.
- The second part: The questions that measured the independent variable (technological vigilance) after reviewing a group of previous studies, among of them [4,10,5,7,1,6).
- The third part: The questions that measured the dependent variable (competitive advantage) after reviewing a set of previous studies, among of them [25,26,12,24,21,11].
- Each of the study variables was measured using a five-degree Likert scale.

### VII. Results discussed:

Results on research questions and discussion of hypotheses:

Answer to the main question:

What is the role of crisis management in improving the quality of health services provided to patients at tlemcen University Hospital?

This main question is branched out by a set of subquestions:

# Question 1: What is the level of enabling crisis management at tlemcen University Hospital?

To answer this question, one Sample T Test was used for a single sample to determine whether there was a statistically significant relationship in the average estimates of the average class search sample individuals (3) according to the scale used, the computational average and relative weight of dimensions were calculated and arranged as shown in the following table:

Table (2) Analysis of the dimensions of the questionnaire to the level of enabling crisis management

|   | Dimension         | Average<br>arithmetic | Relative<br>weight | Standard<br>deviation | Test value t | Probability<br>value | Order |
|---|-------------------|-----------------------|--------------------|-----------------------|--------------|----------------------|-------|
| 1 | Early warning     | 3.35                  | 80.17              | 0.415                 | 39.452       | 0.000                | 2     |
| 2 | Prepare           | 3.43                  | 83.69              | 0.285                 | 41.069       | 0.000                | 1     |
| 3 | Contain<br>damage | 3.12                  | 73.49              | 0.379                 | 23.712       | 0.000                | 5     |
| 4 | Recovery          | 3.32                  | 75.61              | 0.401                 | 31.117       | 0.000                | 4     |
| 5 | Learning          | 3.33                  | 77.29              | 0.155                 | 29.178       | 0.000                | 3     |
|   |                   |                       |                    |                       |              |                      |       |

Total degree of 3.31 78.05 0.327 32.906 0.000 questionnaire

\* t value at 0.05 indicative level

It is clear from the previous table that all the different dimensional averages were similar in relative weights, while the overall score of the questionnaire as a whole received a relative weight of 78.05%. This demonstrates the approval of the research sample at the level of enabling crisis management at the University Hospital of Tlemcen. The results of the dimensions according to their relative weights were as follows:

- 1. The first dimension: early warning, he got second place with a relative weight of (80.17%) That's a very high estimate.
- 2. Second dimension: Readiness, he got the first place with a relative weight of (83.69%) That's a very high estimate.
- 3. The third dimension: containing the damage, he got fifth place with a relative weight of (73.49%) That's a great estimate.
- 4. The fourth dimension: recovery, he got fourth place with a relative weight of (75.61%) That's a great estimate.
- 5. Fifth dimension: Learning, he was ranked third with a relative weight of (77.29%) That's a great estimate.

# - Results of the first dimension paragraphs: early warning:

The t test was used for one sample and the results are shown in the following table, which shows the opinions of the search sample members in the first dimension paragraphs.

Table(3) shows the arithmetic average, relative weight, probability value and order of early warning paragraphs

|   | Paragraph   | Average<br>arithmetic | Relative<br>weight | Test value t | Probability<br>value | Order |
|---|---|-----------------------|--------------------|--------------|----------------------|-------|
| 1 | The hospital has a special section, one of whose tasks are to monitor the indicators of crisis  | 4.20                  | 84.00              | 34.032       | 0.000                | 5     |
| 2 | The hospital's senior<br>management pays<br>attention and support<br>to monitor indicators of<br>crisis                               | 3.70                  | 71.16              | 12.939       | 0.000                | 1 2   |
| 3 | You feel that there is interest in the hospital in collecting and detecting signs of danger, which may be an indication of the crisis | 4.06                  | 81.20              | 25.492       | 0.000                | 8     |
| 4 | The hospital's working environment is thoroughly surveyed to  | 4.21                  | 84.20              | 29.764       | 0.000                | 3     |

|   |   |   | eISSN: 26  | 37-1081   |   |
|---|---|---|--|---|---|
| identify possible signs of crisis   |   |   |  |   |   |
| The hospital's working<br>environment is regularly<br>surveyed for possible<br>crisis indicators  | 4.19  | 83.80   | 34.004   | 0.000   | 6   |
| The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis                             | 4.17  | 83.40   | 26.213   | 0.000   | 7   |
| The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis                             | 4.24  | 74.89   | 29.104   | 0.000   | 1   |
| working environment is<br>thoroughly surveyed to<br>identify possible signs of  | 4.36  | 85.12   | 30.075   | 0.000   | 1   |
| The hospital's external<br>working environment is<br>regularly surveyed for<br>possible crisis indicators                                 | 4.23  | 84.60   | 28.098   | 0.000   | 2   |
| concerned with the classification and classification of crisis  | 4.06  | 84.18   | 20.263   | 0.000   | 4   |
| Hospital management analyzes crisis indicators  | 3.77  | 73.12   | 15.467   | 0.000   | 1   |
| crisis indicators, trained and qualified staff to do  | 4.01  | 80.49   | 26.213   | 0.000   | 9   |
| their duty.  The hospital management is interested in the continuous training of the team to collect and analyze the indicators of crisis | 3.43  | 70.45   | 14.987   | 0.000   | 1 3   |
|   | crisis The hospital's working environment is regularly surveyed for possible crisis indicators The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The hospital's work is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is regularly surveyed for possible crisis indicators Hospital management is concerned with the classification and classification of crisis indicators Hospital management analyzes crisis indicators, trained and qualified staff to do their duty. The hospital management is interested in the continuous training of the team to collect and analyze the indicators of crisis | crisis The hospital's working environment is regularly surveyed for possible crisis indicators The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is regularly surveyed for possible crisis indicators Hospital management is concerned with the classification of crisis indicators Hospital management analyzes crisis indicators Hospital management analyzes crisis indicators, trained and qualified staff to do their duty. The hospital management is interested in the continuous training of the team to collect and analyze the indicators of crisis | crisis The hospital's working environment is regularly surveyed for possible crisis indicators The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is regularly surveyed for possible crisis indicators Hospital management is concerned with the classification of crisis indicators Hospital management analyzes crisis indicators, trained and qualified staff to do their duty. The hospital management is interested in the continuous training of the team to collect and analyze the indicators of crisis | identify possible signs of crisis The hospital's working environment is regularly surveyed for possible crisis indicators The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis The hospital's external working environment is regularly surveyed for possible crisis indicators Hospital management is concerned with the classification of crisis indicators Hospital management analyzes crisis indicators, trained and qualified staff to do their duty. The hospital management is interested in the continuous training of the team to collect and analyze the indicators of crisis | identify possible signs of crisis  The hospital's working environment is regularly surveyed for possible crisis indicators  The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis  The internal environment of the hospital's work is thoroughly surveyed to identify possible signs of a crisis  The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis  The hospital's external working environment is thoroughly surveyed to identify possible signs of a crisis  The hospital's external working environment is regularly surveyed for possible crisis indicators  Hospital management is concerned with the classification and classification of crisis indicators  Hospital management analyzes crisis indicators, trained and qualified staff to do their duty.  The hospital management is interested in the continuous training of the team to collect and analyze the indicators of crisis |

\* t value at 0.05 indicative level

The results from the previous table show that the highest paragraph and the lowest paragraph by relative weight are as follows:

Paragraph 1 (8) which stipulated that 'the external working environment of the hospital is thoroughly surveyed to identify indicators of the likelihood of a crisis' has been ranked first with relative weight (85.12%), indicating that the paragraph has received a very large degree of approval by the sample members.

2. Paragraph 13, which states that 'hospital management is interested in the continuous training of the staff for the collection and analysis of crisis indicators' has ranked last with a relative weight (70.45%), indicating that the paragraph has received a degree of approval by the sample members.

# - Results of the second dimension paragraphs: readiness:

The t test was used for one sample and the results are shown in the following table, which shows the opinions of the search sample members in the second dimension paragraphs.

|          | Paragraph  | Average<br>arithmetic | Relative<br>weight | Test value t | Probability value | Order | The results from the table show that the highest paragraph and the lowest paragraph by relative weight are as follows:  Paragraph 1 (6) which states that 'it is easy to obtain   |
|----------|--|-----------------------|--------------------|--------------|-------------------|-------|---|
| 1        | Different and multiple teams are formed to solve several potential crises in the hospital  | 3.96                  | 79.60              | 22.461       | 0.0               | 10    | the human resources required from other departments and departments when needed to deal with crises' has ranked first with relative weight  |
| 2        | Appropriate support is available for the team that diagnoses and plans potential crises  | 4.02                  | 80.40              | 23.701       | 0.0               | 8     | (89.00%), indicating that the paragraph has received a very large degree of approval by the sample members.   |
| 3        | There are administrative instructions that determine how to deal with potential crises   | 3.91                  | 79.00              | 20.857       | 0.0               | 11    | <ul><li>2. Paragraph 8, which states that 'it is easy to obtain the information capabilities required of other departments and departments when needed to deal</li></ul>          |
| 4        | There are clear and timely<br>management instructions to<br>determine how and how to<br>deal with potential crises at                        | 4.26                  | 85.20              | 30.950       | 0.0               | 3     | with crises' has ranked last with a relative weight (70.13%), indicating that the paragraph has received a degree of approval by the sample members.                              |
| 5        | the hospital. Easy to obtain the material resources required from other departments and departments when needed in order to deal with crises | 4.14                  | 82.80              | 30.911       | 0.0               | 5     | - Results of the third dimension paragraphs: containment of damage: The t test was used for one sample and the results are shown in the following table, which shows the opinions |
| 6        | Easy to obtain the human resources required from other departments and departments when needed in order to deal with crises                  | 4.45                  | 89.00              | 40.019       | 0.0               | 1     | of the search sample members in the third dimension paragraphs.  Table 5 shows the arithmetic average, relative weight, probability value, and order of damage containment        |
| 7        | Easy access to the technical capabilities required from other departments and departments when needed in order to deal with crises           | 4.41                  | 88.20              | 44.949       | 0.0               | 2     | paragraphs<br>5   |
| 8        | Easy access to the information capabilities required from other departments and  | 3.19                  | 70.13              | 33.526       | 0.0               | 15    | Paragraph Average arithmetic Relative weight Test value t Probability   |
| 9        | departments when needed<br>in order to deal with crises<br>The organizational structure<br>is flexible enough to help the                    | 4.05                  | 81.00              | 28.603       | 0.0               | 7     | 1 The time factor when dealing with crises is taken 3.85 79.55 20.250 0.0 4 into account with appropriate accuracy  |
| 10       | hospital deal with crises when they occur. Adequate and ready crisis   | 4.03                  | 01.00              | 20.003       | 0.0               | ,     | 2 The crisis is controlled when it occurs and its   |
| 11       | management programmes<br>and plans are available at<br>the hospital<br>Adequate and ready crisis   | 4.20                  | 85.16              | 21.632       | 0.0               | 4     | spread and continuation 3.78 75.60 17.534 0.0 5 is reduced for an appropriate period of time  |
|          | management programs and plans are available at the hospital and are constantly reviewed and developed.                                       | 3.98                  | 80.23              | 16.963       | 0.0               | 9     | 3 The hospital management responds immediately to contain the crisis by distributing tasks and 3.51 69.51 14.834 0.0 7  |
| 12<br>13 | Regular meetings to deal with potential crises Fake experiments are being  | 3.86                  | 77.36              | 18.321       | 0.0               | 12    | identifying powers in a<br>short and appropriate<br>period when the crisis  |
|          | conducted to deal with potential crises  | 3.51                  | 71.40              | 18.462       | 0.0               | 14    | occurs.  4 Events are affected and  |
| 14       | Adequate crisis management training programmes are available  There are bilateral agreements in crisis                                       | 4.11                  | 82.20              | 30.470       | 0.0               | 6     | emergency procedures are used that efficiently 3.91 82.14 23.217 0.0 3 reduce and reduce the damage caused by the crisis  |
|          | management with relevant institutions and government agencies  Table 4 shows the arithm probability value, an                                |                       |                    |              | weigh             |       | 5 Accurate and rapid communication sought to ascertain the extent of damage caused or may cause the crisis  |
|          | paragraphs   |                       |                    | 0            |                   | -     |   |

| 6 | The hospital management is preparing an appropriate operating room equipped with modern technologies to contain the causes and harms of the crisis | 4.80 | 88.32 | 35.277 | 0.0 | 1 |
|---|--|------|-------|--------|-----|---|
| 7 | There is an appropriate capacity and speed in moving the material and human resources necessary to contain the crisis                              | 4.75 | 86.15 | 19.714 | 0.0 | 2 |

### \* t value at 0.05 indicative level

The results from the table show that the highest paragraph and the lowest paragraph by relative weight are as follows:

Paragraph 1 (6) which states that 'the hospital management is preparing an appropriate operating room equipped with modern techniques to contain the causes and damages of the crisis' has been ranked first with relative weight (88.32%), indicating that the paragraph has received a large degree of approval by the sample members.

2. Paragraph 3, which states that 'the hospital management will respond immediately to contain the crisis by distributing tasks and determining the powers in a short and appropriate period when the crisis occurs', has ranked last with relative weight (69.51%), indicating that the paragraph has received a degree of approval by the members of the sample.

# - Results of the fourth dimension paragraphs: recovery of activity:

The t test was used for one sample and the results are shown in the following table, which shows the opinions of the search sample members in the fourth dimension paragraphs.

Table Number (6) shows the arithmetic average, relative weight, probability value, and order of activity recovery paragraphs

| Paragraph                    |  | Average<br>arithmetic | Relative<br>weight | Test value t | Probability | Order | , |
|------------------------------|--|-----------------------|--------------------|--------------|-------------|-------|---|
| in<br>ma<br>no<br>ho<br>de   | ospital management crisis situations aintains the necessary easures to continue ormal activities in the ospital without any elay | 3.80                  | 86.15              | 19.714       | 0.0         | 1     | 2 |
| de<br>the<br>af<br>ac<br>the | anagement<br>etermines the needs of  | 4.06                  | 84.18              | 20.263       | 0.0         | 2     | 3 |
| 3 The<br>mo                  |  | 3.77                  | 73.12              | 15.467       | 0.0         | 4     | 4 |

|   | of the crisis and reduce its continuing occurrence.   |      |       |        |     |   |
|---|---|------|-------|--------|-----|---|
| 4 | The hospital management initiates appropriate media campaigns for the public and the media about the damage caused by the crisis and how it was dealt with. | 4.14 | 80.49 | 26.213 | 0.0 | 3 |

### \* t value at 0.05 indicative level

The results from the table show that the highest paragraph and the lowest paragraph by relative weight are as follows:

Paragraph 1 (1) which stipulates that 'hospital management in crisis situations maintains the necessary measures to continue normal activities in the hospital without any delay' has been ranked first with relative weight (86.15%), indicating that the paragraph has received a very large degree of approval by the sample members.

- 2. Paragraph 3, which states that 'the hospital management is taking all necessary measures to mitigate the effects of the crisis and reduce its continuing occurrence', has ranked last at a relative weight (73.12%), indicating that the paragraph has received a significant approval rating from the sample members.
- Results of the fifth dimension paragraphs: learning:

The t test was used for one sample and the results are shown in the following table, which shows the opinions of the study sample members in the fifth dimension paragraphs.

Table Number (7) shows the arithmetic average, relative weight, probability value and order of learning paragraphs

>

| Paragraph<br>Average<br>arithmetic<br>Relative<br>weight<br>Test value<br>Probabilit  | Order |
|---|-------|
| Hospital management effectively draws lessons and lessons from the crises it has faced in the past in an effort to benefit from them in the future              | 2     |
| 2 The hospital management evaluates past crisis management plans and programs with a view to developing and improving them in order to deal with future crises. | 3     |
| 3 Hospital management integrates lessons learned from shortcomings and gaps in previous plans with high accuracy in future crisis plans                         | 1     |
| 4 The hospital management is working 3.85 74.89 19.870 0.0  | 4     |

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to take advantage of crisis management methods in other departments in the country or in other countries with similar experiences

\* Table t value at 0.05 indicative level

The results from the table show that the highest paragraph and the lowest paragraph by relative weight are as follows:

Paragraph 1 (3) which states that 'hospital management integrates lessons learned from deficiencies and gaps in previous plans with high accuracy in future crisis plans' has ranked first with relative weight (82.14%), indicating that the paragraph has received a very large degree of approval by the sample members.

2. Paragraph (4) which states that 'hospital management is working to take advantage of crisis management methods in other departments in the country or in other countries with similar experiences' has ranked last with relative weight (74.89%), indicating that the paragraph has received a significant degree of approval by the sample members.

# Question 2: What is the quality of health services at tlemcen University Hospital?

The t-test was used for one sample and the results are shown in the following table, which shows the opinions of the research sample members in the paragraphs to improve the quality of health services.

To answer this question, one Sample T Test was used for a single sample to determine whether there was a statistically significant relationship in the average estimates of the average sample of the average score(3) according to the scale used, the computational average and relative weight of the dimension were calculated and arranged as shown in the following table:

Table [8]. Analysis after questionnaire to improve the quality of health services

|   | Dimension                | Average<br>arithmetic | Relative<br>weight | Standard<br>deviation | Test value t | Probability<br>value |
|---|--------------------------|-----------------------|--------------------|-----------------------|--------------|----------------------|
| 1 | Improving                |                       |                    | 30.155                |              |                      |
|   | the quality<br>of health | 3.02                  | 70.88              |                       | 30.155       | 0.000                |

<sup>\*</sup> t value at 0.05 indicative level

It is clear from the previous table that the average arithmetic role of employees towards improving the quality of health services received a relative weight of (70.88%) This demonstrates that the role of crisis management in improving the quality of health services provided to patients at the University Hospital of Tlemcen has been greatly enhanced.

Table [9] shows the computational average, relative weight, probability value and ranking of paragraphs to improve the quality of health services.

|    | Paragraph  | Average<br>arithmetic | Relative<br>weight | Test value t | Probability<br>value | Order |
|----|--|-----------------------|--------------------|--------------|----------------------|-------|
| 1  | Management reduces errors and complaints as a means of improvement   | 4.41                  | 88.20              | 44.949       | 0.0                  | 3     |
| 2  | Management works to achieve employee satisfaction as a means of maintaining specifications                       | 4.45                  | 89.00              | 40.019       | 0.0                  | 2     |
| 3  | Management keeps records documenting the causes of errors  | 4.14                  | 82.80              | 30.911       | 0.0                  | 8     |
| 4  | Management delegates staff to make improvement decisions   | 4.11                  | 82.20              | 30.470       | 0.0                  | 9     |
| 5  | Management supports individual initiatives as a means of improvement   | 3.92                  | 78.40              | 20.315       | 0.0                  | 12    |
| 6  | Management is keen to deliver the service properly in the first place  | 4.48                  | 89.60              | 39.502       | 0.0                  | 1     |
| 7  | Management adheres to<br>the specific timings of<br>patients   | 4.26                  | 85.20              | 30.950       | 0.0                  | 6     |
| 8  | Management provides structured internal design to facilitate communication                                       | 3.89                  | 77.80              | 19.869       | 0.0                  | 13    |
| 9  | A comprehensive assessment of all stages is carried out  | 4.18                  | 83.60              | 37.678       | 0.000                | 7     |
| 10 | The opinions of the reviewers are surveyed to determine their level of satisfaction                              | 3.98                  | 79.60              | 22.461       | 0.000                | 11    |
| 11 | The overall appearance of the department is consistent with the nature of the services provided to the reviewers | 4.81                  | 75.11              | 22.403       | 0.000                | 15    |
| 12 | Management working hours fit the needs of patients   | 3.69                  | 86.78              | 45.152       | 0.000                | 4     |
| 13 | Patients feel the good treatment of staff and their medical and technical abilities                              | 3.24                  | 85.77              | 32.826       | 0.000                | 5     |
| 14 | Patients expect immediate access to the services required by staff   | 4.05                  | 81.00              | 28.603       | 0.000                | 10    |
| 15 | The Department provides material supplies of the necessary medical equipment                                     | 3.65                  | 76.61              | 20.624       | 0.000                | 14    |

<sup>\*</sup> Table t value at 0.05 indicative level

The results from the table show that the highest paragraph and the lowest paragraph by relative weight are as follows:

Paragraph 1 (6) which stipulated that 'the management is keen to provide the service properly in the first place' has ranked first with relative weight (89.60%), indicating that the paragraph has received

a very large degree of approval by the sample members.

2. Paragraph 11, which states that 'the general appearance of the department corresponds to the nature of the services provided to the reviewers' has been ranked last by relative weight (75.11%), indicating that the paragraph has received a significant approval rating from the sample members.

# Question 3: What is the relationship between crisis management and the quality of health services? Answer to the first main hypothesis:

There is no statistically significant relationship at the level of significance between crisis management and improving the quality of health services at the University Hospital of Tlemcen.

Pearson's test was used to find the link between crisis management and improving the quality of health services at the University Hospital of Tlemcen.

Table [10]. The link between crisis management and improving the quality of health services at the University Hospital of Tlemcen

| Crisis management |           |                     |                         |            |  |  |
|-------------------|-----------|---------------------|-------------------------|------------|--|--|
| Improving auality | the<br>of | Link<br>coefficient | Probability value (sia) | Link grade |  |  |
| health serv       |           | 0.807               | 0.000                   | Bia.       |  |  |

The table shows that the probability value is equal to (0.000) and is below the level of indication (0.05), which indicates a statistically significant correlation at the level of statistical significance (a $\leq$  0.05) between crisis management and improving the quality of health services at the University Hospital of Tlemcen. To answer this hypothesis, we have verified several hypotheses:

- The first hypothesis: there is no statistically significant relationship at the level of significance (a  $\leq 0.05$ ) between early warning and improving the quality of health services in the University Hospital of Tlemcen. Pearson's test was used to find the link between early warning and improving the quality of health services at the University Hospital of Tlemcen.

Table [11]. The correlation between early warning and improving the quality of health services at the University Hospital of Tlemcen

| Early warning |        |             |             |       |  |  |  |
|---------------|--------|-------------|-------------|-------|--|--|--|
| Improving     | the    | Link        | Probability | Link  |  |  |  |
| quality of    | health | coefficient | value (sig) | grade |  |  |  |
| services      |        | 0.853       | 0.000       | Ria   |  |  |  |

The table shows that the probability value is equal to (0.000) and is below the level of indication (0.05), which indicates a statistically significant correlation at the level of statistical significance (a $\leq$  0.05) between early warning and improving the quality of health services at the University Hospital of Tlemcen.

- The second hypothesis: there is no statistically significant relationship at the level of indication ()

# between readiness and improving the quality of health services in the University Hospital of Tlemcen.

Pearson's test was used to find the link between readiness and improving the quality of health services at the University Hospital of Tlemcen.

Table [12]. The correlation between readiness and improving the quality of health services at the University Hospital of Tlemcen

|                       | Pre         | pare        |       |
|-----------------------|-------------|-------------|-------|
| Improving             | Link        | Probability | Link  |
| the quality           | coefficient | value (sig) | grade |
| of health<br>services | 0.725       | 0.000       | Big.  |

The table shows that the probability value is equal to (0.000) and is below the level of indication (0.05), which indicates a statistically significant correlation at the level of statistical significance (a $\leq$  0.05) between readiness and improving the quality of health services at the University Hospital of Tlemcen.

- The third hypothesis: there is no relationship of statistical significance at the level of significance (a  $\leq 0.05$ ) between containing the damage and improving the quality of health services in the University Hospital of Tlemcen.

Pearson's test was used to find the link between containing damage and improving the quality of health services at the University Hospital of Tlemcen. Table [13]. The correlation between damage containment and improving the quality of health services at the University Hospital of Tlemcen

| Contain damage        |                     |                         |            |  |  |  |  |  |  |
|-----------------------|---------------------|-------------------------|------------|--|--|--|--|--|--|
| Improving the quality | Link<br>coefficient | Probability value (sig) | Link grade |  |  |  |  |  |  |
| of health             | 0.865               | 0.000                   | Big.       |  |  |  |  |  |  |

The table shows that the probability value is equal to (0.000) and is below the level of indication (0.05), which indicates a statistically significant correlation at the level of statistical significance (a $\leq$  0.05) between containing damage and improving the quality of health services at the University Hospital of Tlemcen.

- The fourth hypothesis: There is no statistically significant relationship at the level of significance (a  $\leq 0.05$ ) between restoring activity and improving the quality of health services in the University Hospital of Tlemcen.

Pearson's test was used to find the link between restoring activity and improving the quality of health services at the University Hospital of Tlemcen.

Table [14]. The correlation between recovery and improving the quality of health services at the University Hospital of Tlemcen

| Recovery       |          |                     |                         |            |  |  |  |  |
|----------------|----------|---------------------|-------------------------|------------|--|--|--|--|
| Improving the  | ne<br>of | Link<br>coefficient | Probability value (sig) | Link grade |  |  |  |  |
| health service | es       | 0.627               | 0.000                   | Medium.    |  |  |  |  |

The table shows that the probability value is equal to (0.004) and is below the indication level (0.05), which indicates a statistically significant correlation at the level of statistical significance () between recovery and improving the quality of health services at the University Hospital of Tlemcen.

# - The fifth hypothesis: There is no statistically significant relationship at the level of significance () between learning and improving the quality of health services in the University Hospital of Tlemcen.

Pearson's test was used to find the link between learning and improving the quality of health services at the University Hospital of Tlemcen.

Table [15]. The correlation between learning and improving the quality of health services at the University Hospital of Tlemcen

|                       | L                   | earning.                |            |
|-----------------------|---------------------|-------------------------|------------|
| Improving the quality | Link<br>coefficient | Probability value (sig) | Link grade |
| of health<br>services | 0.619               | 0.000                   | Medium.    |

The table shows that the probability value is equal to (0.002) and is below the indication level (0.05), which indicates a statistically significant correlation at the level of statistical significance (a  $\leq 0.05$ ) between learning and improving the quality of health services at the University Hospital of Tlemcen.

Question 4: Are there statistically significant differences in the responses of the sample members to the direction of the study variables depending on the demographic variables (type, age, scientific qualification, job title)?

# - Answer to the second main hypothesis: There are no statistically significant differences at the level of significance (a $\leq$ 0.05) in the response of the sample members according to demographic variables.

To answer this hypothesis, we have verified the following hypotheses:

- The initial hypothesis of the research hypotheses that states: There are no statistically significant differences at the level of indication (a  $\!\leq\!0.05$ ) in the response of the sample members to crisis management in improving the quality of health services according to type.

To validate this hypothesis, the T-eye test was used to test the relationship between the averages of the research sample estimates of the crisis management trend in improving the quality of health services by type.

Table [16]. Independent Samples T Test results among averages of research sample estimates for crisis management trend in improving the quality of health services by type

| □ | $\sim$ $\Phi$ $\times$ | $\subseteq \supset$ | < > 0 - | ≃ <u>o</u> o ≔ | ⊢ e ts > | 7 0 D C |
|---|------------------------|---------------------|---------|----------------|----------|---------|
|   | 14.1.                  | 10                  | 4.0.5   | 0.501          | 0.701    | 0.475   |

|                              |                    |    |      |       | C1331 1. 2037 | 1001  |
|------------------------------|--------------------|----|------|-------|---------------|-------|
| Early                        | femal              |    |      |       |               |       |
| warnin<br>g                  | е                  | 23 | 4.18 | 0.569 |               |       |
| Prepar                       | Male               | 12 | 4.30 | 0.528 |               |       |
| е                            | Fema<br>le         | 23 | 4.35 | 0.571 | 0.613         | 0.540 |
| Contai<br>n                  | Male<br>femal      | 12 | 3.65 | 0.570 |               |       |
| dama<br>ge                   | е                  | 23 | 3.92 | 0.569 | 2.955         | 0.003 |
| Recov                        | Male               | 12 | 3.78 | 0.607 |               |       |
| ,                            | femal<br>e         | 23 | 3.97 | 0.568 | 1.840         | 0.067 |
| Learnin                      | Male               | 12 | 3.75 | 0.522 |               |       |
| g                            | femal<br>e         | 23 | 3.98 | 0.590 | 2.771         | 0.006 |
| Improvi<br>ng the<br>quality | Male<br>femal<br>e | 12 | 3.62 | 0.521 |               |       |
| of<br>health<br>service      |                    | 23 | 3.81 | 0.575 | 1.542         | 0.004 |
| Total                        | Male               | 12 | 4.07 | 0.410 |               |       |
| degre<br>e                   | femal<br>e         | 23 | 4.21 | 0.434 | 2.616         | 0.009 |

The table shows that the probability value of the total score is equal to (0.009), which is lower than the indication level (0.05) and the calculated t value is equal to (2.616) and is greater than the t-table value of (1.96), which indicates a statistically significant correlation at the level of indication () of the averages of the research sample estimates of the direction of crisis management in improving the quality of health services by type, and by comparing the averages of the relationship to the female.

- The second hypothesis of the research hypotheses, which states: There are no statistically significant differences at the level of indication () in the response of the sample members to crisis management in improving the quality of health services depending on age.

To validate this hypothesis, the monocontrast analysis test was used to test the relationship in the opinions of the research sample between the averages of the research sample estimates of the crisis management trend in improving the quality of health services by age.

Table [17]. Results of One Way ANOVA between average synopsis estimates for crisis management trend in improving the quality of health services by age

| Dimension        | Source of variance | Tota<br>I squares | Degree of<br>freedom | Average<br>squares | Value<br>'F' | Probability<br>(Sig.) |
|------------------|--------------------|-------------------|----------------------|--------------------|--------------|-----------------------|
| Early<br>warning | Between<br>groups  | 0.189             | 2                    | 0.095              | 0.036        | 0.483                 |
|                  | Within<br>groups   | 85.471            | 32                   | 2.671              | 0.000        | 000                   |
| _                | Total              | 85.660            | 34                   |                    |              |                       |
| Prepare          | Between<br>groups  | 0.752             | 2                    | 0.376              | 0.118        | 0.397                 |
|                  | Within<br>groups   | 92.742            | 32                   | 3.198              |              |                       |
|                  | Total              | 93.494            | 34                   |                    |              |                       |

|   | Contain<br>damag     | Between<br>groups | 0.316                           | 2        | 0.158 | 0.048      | 0.690 | Conta<br>in      | Between<br>groups | 3.847   | 2     | 1.924 | 0.497 | 0.414 |
|---|----------------------|-------------------|---------------------------------|----------|-------|------------|-------|------------------|-------------------|---------|-------|-------|-------|-------|
|   | е                    | Within<br>groups  | 95.010                          | 32       | 3.276 | 0.040      | 0.070 | dama<br>ge       | Within<br>groups  | 123.848 | 32    | 3.870 | 0.477 | 0.414 |
|   |                      | Total             | 95.326                          | 34       |       |            |       |                  | Total             | 127.695 | 34    |       |       |       |
|   | Recover<br>y         | Between<br>groups | 4.724                           | 2        | 2.362 | 0.772      | 0.412 | Recov<br>ery     | Between<br>groups | 0.529   | 2     | 0.265 | 0.087 | 0.609 |
|   |                      | Within<br>groups  | 88.770                          | 32       | 3.061 | 0, 2       | 02    |                  | Within<br>groups  | 100.217 | 32    | 3.132 | 0.007 | 0.007 |
|   |                      | Total             | 93.494                          | 34       |       |            |       |                  | Total             | 100.747 | 34    |       |       |       |
|   | Learning             | Between<br>groups | 0.024                           | 2        | 0.012 |            |       | Learni<br>ng     | Between<br>groups | 0.316   | 2     | 0.158 |       |       |
|   | Within<br>groups     | 81.362            | 32                              | 2.543    | 0.005 | 0.533      |       | Within<br>groups | 95.010            | 32      | 2.969 | 0.053 | 0.691 |       |
|   |                      | Total             | 81.386                          | 34       |       |            |       |                  | Total             | 95.326  | 34    |       |       |       |
|   | Improvin<br>g the    | Between<br>groups | 0.593                           | 2        | 0.297 |            |       | Impro<br>ving    | g groups          | 0.509   | 2     | 0.255 |       |       |
|   | quality<br>of health | Within<br>groups  | 79.413                          | 32       | 2.482 | 0.120      | 0.577 | the<br>quality   | Within<br>groups  | 83.760  | 32    | 2.618 | 0.007 | 0.510 |
|   | services             | Total             | 80.006                          | 34       |       |            |       | of               | Total             |         |       |       | 0.097 | 0.513 |
|   | Total<br>degree      | Between<br>groups | 6.467                           | 2        | 3.234 | 2.244      | 0.061 | health<br>servic |                   | 84.269  | 34    |       |       |       |
|   |                      | Within<br>groups  | 46.112                          | 32       | 1.441 |            | 0.00. | es<br>Total      | Between           |         |       |       |       |       |
|   |                      | Total             | 52.579                          | 34       |       |            |       | degre            | groups            | 0.335   | 2     | 0.168 | 0.171 | 0.713 |
|   |                      |                   |                                 |          |       |            |       | е                | Within            | 31.356  | 32    | 0.980 | 0.171 | 0.713 |
|   |                      | shows tha         |                                 |          |       |            |       |                  | groups<br>Total   | 31.691  | 34    |       |       |       |
| _ | :                    | l                 | $\cap \cap / 1 \setminus \dots$ | منمامنما |       | ممالح مديم |       |                  |                   |         |       |       |       |       |

The table shows that the probability value of the total score is equal to (0.061), which is greater than the indication level (0.05) and the calculated f value is equal to (2.244) and is lower than the ply-value f value of 3.02, indicating that there is no statistically significant correlation at the level of indication () between the averages of the research sample estimates of the direction of crisis management in improving the quality of health services according to age.

- The third hypothesis of the research hypotheses, which states: There are no statistically significant differences at the level of significance () in the response of the sample members to crisis management in improving the quality of health services according to the scientific qualification.

To validate this hypothesis, the monocontrast analysis test was used to test the relationship in the opinions of the research sample between the averages of the research sample estimates of the crisis management trend in improving the quality of health services depending on scientific qualification.

Table [18]. Results of One Way ANOVA between average scan estimates for crisis management trend in improving the quality of health services according to scientific qualification

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The previous table shows that the probability value of the total score is equal to (0.713) and is greater than the indication level (0.05) and the calculated f value is equal to (0.171) which is lower than the ply-value f value of 3.06, indicating that there is no statistically significant correlation at the level of indication () between the averages of the research sample estimates for crisis management in improving the quality of health services according to scientific qualification.

- The fourth hypothesis of the research hypotheses, which states: There are no statistically significant differences at the level of indication () in the response of the sample members to crisis management in improving the quality of health services according to the job name.

To validate this hypothesis, the monocontrast analysis test was used to test the relationship in the opinions of the research sample between the averages of the research sample estimates of the crisis management trend in improving the quality of health services depending on the job name.

Table 19 Results of One Way ANOVA between average synopsis of the research sample for crisis management trend in improving the quality of health services according to job title

|                 | O                  | 10              | 0                 |                    |                |   | es accordi            | ng 10 job 1   | IIIC                 |                    |              |             |
|-----------------|--------------------|-----------------|-------------------|--------------------|----------------|---|-----------------------|---------------|----------------------|--------------------|--------------|-------------|
| Dimension       | Source<br>variance | Tr<br>I squares | Degree<br>freedom | Average<br>squares | Value<br>· F · | r<br>Probability<br>(Sig.)<br>Dimension | Source of<br>variance | Total squares | Degree of<br>freedom | Average<br>squares | Value<br>'F' | robotility. |
| Early<br>warnin | Between<br>groups  | 0.194           | 2                 | 0.097              |                |   |                       | Tol           | <u> </u>             |                    |              | Δ           |
| g               | Within<br>groups   | 99.466          | 32                | 3.108              | 0.031          | 0.67 <u>P</u> arly<br>war               | Between<br>groups     | 0.383         | 2                    | 0.192              | 0.062        | C           |
| _               | Total              | 99.660          | 34                |                    |                | ning                                    | Within<br>groups      | 99.277        | 32                   | 3.102              | 0.062        | (           |
| Prepar<br>e     | Between<br>groups  | 2.165           | 2                 | 1.083              | 0.004          | 0.007                                   | Total                 | 99.660        | 34                   |                    |              |             |
|                 | Within<br>groups   | 114.050         | 32                | 3.564              | 0.304          | 0.387 <sub>rep</sub><br>are             | Between<br>groups     | 0.895         | 2                    | 0.448              | 0.124        | 0           |
|                 | Total              | 116.215         | 34                |                    |                |   | Within                | 115.320       | 32                   | 3.604              |              |             |

|                                    | Total                     | 116.215 | 34    |       |       |       |
|------------------------------------|---------------------------|---------|-------|-------|-------|-------|
| Con<br>tain                        | Between<br>groups         | 0.273   | 2     | 0.137 | 0.034 | 0.690 |
| da<br>ma                           | Within<br>groups          | 127.422 | 32    | 3.982 | 0.004 | 0.070 |
| ge                                 | Total                     | 127.695 | 34    |       |       |       |
| Rec<br>over                        | Between<br>groups         | 0.874   | 2     | 0.437 | 0.140 | 0.369 |
| У                                  | Within<br>groups          | 99.873  | 32    | 3.121 |       |       |
|                                    | Total                     | 100.747 | 34    |       |       |       |
| Lear<br>ning                       | Between<br>groups         | 0.356   | 2     | 0.178 |       |       |
|                                    | Within<br>groups<br>Total | 112.698 | 32    | 3.522 | 0.051 | 0.451 |
|                                    |                           | 113.054 | 34    |       |       |       |
| Impr Between ovin groups           | 0.271                     | 2       | 0.136 |       |       |       |
| g<br>the                           | Within<br>groups          | 90.483  | 32    | 2.828 |       |       |
| qual Total<br>ity of<br>heal<br>th | 90.754                    | 34      |       | 0.048 | 0.580 |       |
| servi<br>ces<br>Tota<br>I          | Between<br>groups         | 0.011   | 2     | 0.006 | 0.002 | 0.476 |
| deg<br>ree                         | Within<br>groups          | 96.950  | 32    | 3.030 | 0.502 | 0.470 |
| .00                                | Total                     | 96.962  | 34    |       |       |       |

The table shows that the probability value of the total score is equal to (0.476), which is greater than the indication level (0.05) and the calculated f value is equal to (0.002) and is lower than the ply-value f value of (1.15), indicating that there is no statistically significant correlation at the level of indication () between the averages of the research sample estimates of the direction of crisis management in improving the quality of health services according to the job name.

# 10.0Discussion and Conclusions:

# \* Results for the independent variable (crisis management):

- 1. All the different dimensional averages were similar in relative weights, gaining a relative weight of (78.05%) Highly rated.
- 2. The first dimension: early warning ranked second with a relative weight of (80.17%) That's a very high estimate.
- 3. The second dimension: first-place readiness with a relative weight of (83.69%) That's a very high estimate.
- 4. The third dimension: the inclusion of damage sits fifth with a relative weight of (73.49%) That's a great estimate
- 5. The fourth dimension: Recovery of activity ranked fourth with a relative weight of (75.61%) That's a great estimate.
- 6. The fifth dimension: Learning ranked third with a relative weight of (77.29%) That's a great estimate.
- \* Results on the dependent variable (improving the quality of health services):

The average arithmetic role of employees towards improving the quality of health services received a relative weight of (70.88%) And it came to a great extent.

# \* Results related to research assignments and relationships:

- 1. The existence of a correlation relationship of statistical significance at the level of statistical significance (a0.05  $\leq$ ) between crisis management and improving the quality of health services in the University Hospital.
- 2. The existence of a correlation relationship of statistical significance at the level of statistical significance (a0.05  $\leq$ ) between early warning and improving the quality of health services in the University Hospital.
- 3. The existence of a correlation relationship of statistical significance at the level of statistical significance (a0.05  $\leq$ ) between readiness and improving the quality of health services in the University Hospital.
- 4. The existence of a correlation relationship of statistical significance at the level of statistical significance (a0.05  $\leq$ ) between containing damage and improving the quality of health services in the University Hospital.
- 5. The existence of a correlation relationship of statistical significance at the level of statistical significance (a $\leq$ 0.05) between restoring activity and improving the quality of health services in the University Hospital.
- 6. The existence of a correlation relationship of statistical significance at the level of statistical significance (a $\leq$  0.05  $\leq$ ) between learning and improving the quality of health services in the University Hospital.
- 7. There are statistically significant differences at the level of indication (a  $\leq$  0.05) between the averages of the research sample estimates of the direction of crisis management in improving the quality of health services according to type, and it was found by comparing the averages that the relationship was in favor of females.

- 10. There are no statistically significant differences at the level of indication (a  $\leq 0.05$ ) between the averages of the research sample estimates of the direction of crisis management in improving the quality of health services according to the job name.

### 11.0 Recommendations:

After drawing the research findings, we make some of the following recommendations:

- 1. The hospital management should be interested in the continuous training of the team to collect and analyze the indicators of crisis.
- 2. Work on facilities to obtain the required information capabilities from other departments and departments when needed in order to deal with crises.
- 3. Work to manage the hospital by responding immediately to contain the crisis by distributing tasks and determining the powers in a short and appropriate period in the event of a crisis.
- 4. The hospital management should take all necessary measures to mitigate the effects of the crisis and reduce its continuing occurrence.
- 5. Work on managing the hospital to take advantage of crisis management methods in other departments in the country or in other countries with similar experiences.
- 6. The need to adapt the overall appearance of management to the nature of the services provided to the reviewers.

# 12.0 Acknowledgement

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Suleiman Salama El-Deeb, part-time professor at the University of Palestine, Gaza, holds a PhD from the University of the Holy Qur'an and the Rooting of Science in Sudan

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