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The Impact of Artificial Intelligence Technologies on Judicial Crisis Management in Palestine

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Abstract

This study explores the impact of artificial intelligence (AI) technologies on crisis management within the judicial system in Southern Palestine. Relying on data collected from 320 employees working in various courts, the research examines the extent to which AI applications contribute to the effectiveness of crisis management processes. The results indicate a moderate positive relationship between the use of AI technologies and the efficiency of crisis response mechanisms. In particular, the implementation of big data analytics and decision support systems showed significant influence on enhancing institutional readiness and response. The study also reveals that both the level of AI adoption and the effectiveness of crisis management remain at a moderate stage, suggesting a need for further development in areas such as advanced AI tools, data-driven decision-making strategies, and targeted capacity building for staff. These insights highlight the promising role of AI in reinforcing the resilience and adaptability of judicial institutions during times of crisis. Furthermore, the study provides practical recommendations for policymakers and judicial administrators in developing countries, emphasizing the importance of investing in technological infrastructure and specialized training to leverage AI capabilities for more efficient and proactive crisis management.

Keywords: Artificial intelligence, crisis management, judicial crisis, Palestine.

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1. Introduction

The contemporary global landscape is marked by rapid and continuous transformations, where conditions shift with unprecedented speed. This volatile environment has amplified both internal and external pressures on organizations, necessitating the enhancement of their capabilities to effectively assume responsibilities and meet growing demands. In response, organizations—including judicial and security institutions—are increasingly required to adapt and strengthen their operational efficiency to navigate these challenges. The era of predictable stability has given way to a reality defined by recurrent crises, uncertainties, and multifaceted disruptions. With scientific and technological advancements becoming integral to daily operations, organizations now face the imperative to evolve their strategies and frameworks to manage both existing and emerging threats. These evolving crises, often complex and unpredictable, demand adaptive and proactive management approaches. Within this context, Palestinian courts encounter significant difficulties in crisis management, where the ability to respond swiftly and effectively is essential to preserving the rule of law and safeguarding citizens' rights. In light of accelerating technological progress, artificial intelligence (AI) emerges as a vital enabler, offering advanced tools

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and analytical capabilities that can substantially enhance the preparedness, responsiveness, and resilience of judicial institutions in the face of crises.

Cultural factors represent one of the most prominent challenges influencing the adoption of artificial intelligence (AI) within the Palestinian judicial system. Deeply rooted beliefs, societal values, and prevailing perceptions significantly shape individuals' attitudes toward the integration of emerging technologies. In many cases, apprehensions arise that the implementation of AI may undermine the human role, provoking concerns over job displacement or diminishing the value of judges' and lawyers' professional judgment and expertise. Furthermore, limited public trust in advanced technologies—particularly in regions with underdeveloped digital infrastructure—may pose an additional barrier to the widespread acceptance of AI. Institutional resistance, whether organizational or social, may also stem from a lack of awareness about the practical benefits of AI or fears that its adoption could complicate rather than streamline existing judicial procedures. To overcome these barriers, it is imperative to promote cultural openness toward technological innovation. This can be achieved through targeted awareness campaigns and continuous professional development

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programs that emphasize the supportive role of AI in enhancing institutional efficiency, transparency, and decision-making quality, without replacing the human element. Cultivating such understanding is essential for fostering a constructive environment that embraces AI as a complementary tool in judicial practice.

Crisis management is a critical organizational function aimed at reducing the adverse effects of crises and ensuring timely and effective responses. In recent years, artificial intelligence (AI) has emerged as a pivotal tool in this domain, offering advanced capabilities such as big data analytics, machine learning, and predictive modeling. As noted by Smith et al. (2022), AI facilitates the early detection of potential crises by analyzing historical data patterns, thereby enabling organizations to make informed, data-driven decisions in real time. These technological capabilities contribute not only to mitigating losses but also to enhancing institutional resilience and agility during emergencies.

Theoretical frameworks in crisis management, such as Mitroff's model, underscore the necessity of proactive preparation and systematic response strategies. AI technologies align with and reinforce these models by offering

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integrated tools, including early warning systems and real-time communication channels. Brown and Wilson (2021) highlight that AI platforms can significantly improve coordination across response teams by leveraging real-time data analytics, thus enhancing the overall effectiveness of crisis response efforts.

Furthermore, technology adoption theories such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) provide essential insights into the factors influencing AI adoption in crisis management. According to Davis et al. (2023), perceived ease of use and practical value are key determinants of AI implementation. Within judicial institutions, these factors play a decisive role in promoting the adoption of AI technologies to improve crisis preparedness and response, ultimately supporting more efficient and adaptive management practices.

2. Literature Review

2.1. Background and Problem of the Study

Effective crisis management necessitates not only the competence of decision-makers but also the capacity to make rapid and coordinated decisions across all administrative and operational levels under the pressure

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of limited time. This process increasingly relies on the integration of advanced technologies and tools developed by leading nations and institutions, following the principle of building upon the achievements of others. At the core of this approach lies the acquisition of accurate and timely information, coupled with the ability to utilize it effectively for forecasting and strategic planning. In this context, decision support systems play a vital role in enhancing the speed and precision of crisis response. Artificial intelligence (AI) has emerged as a transformative force in this domain, offering innovative solutions that enhance the effectiveness of crisis management. AI technologies enable institutions to analyze vast amounts of data in real time, supporting informed decision-making and adaptive strategies. In judicial institutions, particularly courts, the reliance on information and communication networks underscores the necessity of activating comprehensive information systems. The full utilization of technological infrastructure is essential to effectively respond to the dynamic challenges posed by modern crises, which increasingly threaten institutional stability and operational continuity (Ghanem, 2021).

Artificial intelligence (AI) represents a transformative force in

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strengthening institutional capacities for effective crisis management. Technologies such as natural language processing and big data analytics empower organizations to detect early warning indicators that signal the potential onset of crises. Within the judicial sector, these tools can be employed to systematically analyze historical legal cases and identify patterns that may forecast emerging legal conflicts with the potential to escalate into broader institutional crises. By leveraging such predictive capabilities, AI contributes to enhanced operational efficiency, enabling judicial bodies to act proactively rather than reactively. Moreover, it minimizes the risks associated with decision-making under uncertainty by providing data-driven insights, ultimately supporting more informed, timely, and strategic responses to complex challenges(Choi et al., 2022).

Artificial intelligence technology, in particular, has assumed a central role, emerging as a crucial technological tool that profoundly impacts various aspects of our daily existence. AI applications have permeated numerous administrative and educational fields, including graphical analytics, intelligent automation, and machine learning. This underscores its significant importance in management and leadership domains. In a world

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characterized by rapid changes and intense competition, understanding the connection between AI technology and managerial performance is critical. Leaders and managers in institutions and organizations face escalating challenges in resource management and strategic decision-making. AI technology offers tools and solutions that can empower them and enhance their performance in addressing these challenges (Iwadi et al., 2024).

The true birth of artificial intelligence began with the founding research conference in 1956 at Dartmouth College, initiated by John McCarthy, Marvin Minsky, Allen Newell, Arthur Samuel, and Herbert Simon. They were able to solve problems in algebra, prove logical theorems, and work with the English language (Ahmad N. , 2022).

Artificial intelligence is composed of two words: "artificial" and "intelligence." Intelligence refers to the ability to understand new situations or conditions, with its key elements being perception, which is the capacity to comprehend and learn. The term "artificial" is linked to the act of "creating" or "manufacturing" and is used to describe things that arise as a result of human activity or actions, distinguishing them from things that naturally exist or are generated without human intervention (Jouzi & Bouzid ,

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2020).

Artificial intelligence is defined as a set of programs that allow a computer to simulate human intelligence and capabilities, enabling it to perform tasks that require understanding, interpretation, reasoning, movement, and the execution of various life skills (Mujahed, 2020). Artificial intelligence is defined as a collection of systems and technologies aimed at enabling machines to simulate human capabilities such as learning, understanding, decision-making, and problem-solving, thereby allowing effective interaction with the surrounding environment (Russell & Norvig, 2021). Artificial intelligence is also defined as a science that mimics human intelligence and human capabilities. It has become the "oil of the era," as it simulates human intelligence to create specific effects by making decisions in a free and independent manner. Today, we often hear the term artificial intelligence, but most of us associate it with science fiction movies in Hollywood (Ahmad N. , 2022).

Researchers define artificial intelligence as a set of technologies and computer systems capable of simulating human intelligence in analyzing data and making decisions independently or semi-independently. In the

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context of crisis management, AI is used to rapidly analyze large volumes of information, predict potential developments, and provide data-driven recommendations to facilitate decision-making.

The scientific goal of artificial intelligence lies in identifying theories related to knowledge representation, learning, rule-based systems, and research that explains different types of intelligence. The engineering goal of AI is to equip machines with the ability to solve real-world problems. Some researchers believe that the goal of AI is to simulate human cognition, while others view the goal as creating intelligence without considering any human characteristics. Additionally, other researchers see the objective of AI as developing useful tools to meet human needs and enhance convenience (Muawiyah, 2018).

Crisis management in the Palestinian judiciary is considered one of the major challenges due to the complex political and economic circumstances facing the judicial system. The Palestinian judiciary suffers from a lack of infrastructure and modern technology, which affects the system's ability to handle crises efficiently. On the other hand, the use of technologies such as artificial intelligence and data analytics can contribute to improving the

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speed of response to judicial crises by providing innovative solutions for dispute management and prioritizing urgent cases. Additionally, the lack of coordination among various judicial bodies is one of the biggest challenges, as these issues impact the effectiveness of decision-making during crises (Al-Debei et al., 2023).

Some researchers, including Preble (1997), note that the origin of the word "crisis" comes from the Greek word "krisis," which means judgment, choice, or decision. A crisis is defined as a significant and unexpected event that brings, or has the potential to bring, an institution into a state of fragmentation and disruption, placing its future at risk. This risk pertains not only to the institution's profit levels and growth rate but also to its very existence (Abu Hujair, 2018).

Crisis management is defined as a dynamic and ongoing process that involves highly effective actions and responsive measures. Its purpose is to identify and diagnose the crisis, plan for it, confront it, and manage it effectively (Abu Fara, 2018). It is also defined as a system used to manage crises, aimed at preventing their occurrence and planning for situations that are difficult to avoid, with the goal of controlling the outcomes and

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minimizing negative impacts (Ghanem, 2021). Crisis management is the process that involves strategies and tactics aimed at dealing with unexpected events or urgent pressures in a way that ensures damage reduction and the restoration of stability (Pauchant & Mitroff, 2022).

Researchers define crisis management as the process of planning and implementing a set of actions and measures aimed at dealing with unexpected events that may negatively affect the operation and stability of institutions. In this context, crisis management involves identifying potential risks, analyzing their impact, and developing effective response strategies to ensure operational continuity and minimize damage. It also includes immediate response to emergencies, coordinating resources and efforts among various stakeholders, and assessing the effectiveness of the response to learn lessons for improving future strategies. In the case of Palestinian courts, crisis management focuses on ensuring the continued effective operation of the judicial system during crises by applying technological strategies, such as artificial intelligence, to enhance the ability to predict and manage crises more efficiently.

The Palestinian judiciary faces unique challenges in crisis management due

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to the complex political and economic environment in which it operates. The Palestinian judicial system suffers from weak infrastructure, as well as limited financial and human resources, which affects its ability to handle crises effectively. Other challenges include political divisions within the Palestinian judiciary, leading to poor coordination among judicial institutions. These factors make it difficult to ensure swift and effective justice in the face of legal crises (Abu Jaber & Khlaifat, 2023).

Furthermore, Palestinian courts face significant challenges in implementing modern technology in judicial crisis management. Despite efforts to enhance the use of information technology in the Palestinian judicial system, many courts still lack the necessary modern technologies to analyze legal data or manage cases effectively during crises. Additionally, the lack of training in the use of technological tools and the hesitation of judicial institutions to adopt digital systems hinder the necessary progress in this area (Hassan & Othman, 2023).

Poor crisis management can exacerbate the situation, leading to disasters, whether material or human. Therefore, this study and its findings could be valuable for Palestinian courts and their staff by directing their attention to

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the importance of artificial intelligence and its various applications. By utilizing AI effectively, they can work towards providing better and faster services to citizens, ensuring a dignified life and helping them achieve their hopes and aspirations.

The literature review on the research topic provides valuable insights into the role of artificial intelligence (AI) across various domains, particularly within the Palestinian judicial system and beyond. Several studies have explored the impact of AI on improving efficiency, transparency, and decision-making during crises and in everyday operations.

One significant contribution is from Al-Qudsi and Al-Jamal (2024), who evaluated AI's impact on enhancing operational efficiency in Southern Palestinian courts during crises. The study revealed a noticeable improvement in the speed of case resolution and greater litigant satisfaction after the integration of AI in court procedures. It emphasized the need for judicial staff training on AI use and further integration into judicial processes to maximize performance.

In a similar vein, Al-Buqaa and Al-Masri (2024) focused on how AI reduces delays and enhances the execution efficiency of judicial rulings in the courts

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of Southern Palestine. Their findings indicated that AI contributed to shortening the time for implementing judicial rulings and overall system efficiency. The study recommended expanding AI's use throughout the entire judicial process to speed up procedures and improve justice outcomes.

Almuslim's (2023) study explored the attitudes of elementary science teachers in the Jazan region toward AI applications in education, highlighting positive views but also the lack of incentives to encourage AI integration. The study called for proper teacher training and the development of necessary infrastructure to support AI implementation in educational settings.

Further, Al-Saqi and Abu-Khalaf (2023) analyzed the influence of AI on the quality of litigation services in Southern Palestine's courts. The study found significant improvements in judicial evidence accuracy and a reduction in litigation costs with the introduction of AI. The researchers recommended the establishment of national policies to adopt AI technologies in judicial systems, ensuring sustainable quality improvements.

Transparency and credibility in judicial procedures were the focus of the study by Al-Shaer and Al-Darwish (2023). Their research demonstrated that

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AI technologies not only enhanced the transparency of the judicial process but also bolstered the credibility of the judicial system in Southern Palestine. They advocated for continued AI development and increased usage to promote justice and transparency in the legal system.

In the field of industrial business management, AlOmar (2022) examined AI's role in mitigating risks associated with cloud accounting in Jordanian industrial companies. The study found that AI significantly reduced cloud accounting risks and recommended prioritizing AI system implementation in industrial businesses. It also emphasized the need for training and educating employees about AI technologies to further benefit from their capabilities.

Ahmad's (2022) research tackled the application of AI in administrative decision-making, focusing on its potential to reduce administrative errors, streamline bureaucracy, and protect individuals' rights. The study suggested that comprehensive legal regulations be established to govern intelligent automation within public administration.

The role of AI in handling complex judicial cases within the Palestinian judicial system was analyzed by Al-Jabari and Al-Najjar (2022), who highlighted AI's potential to enhance the system's ability to address complex

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legal cases more effectively. They recommended strengthening AI use in analyzing large cases and judicial data to improve overall judicial performance.

Al-Shamaileh and Alqalah (2022) explored how AI technologies like machine learning and big data analytics can improve judicial crisis management in Southern Palestine. Their findings revealed that AI led to faster and more effective decision-making, reducing the time required to resolve cases. The study called for the broader application of AI technologies across all courts to expedite judicial procedures and enhance justice services.

Finally, Abu Hujair (2018) examined strategic leadership practices in Palestinian government institutions, particularly in managing risks and crises. His study showed a moderate acceptance of external environments by respondents, with strategic leadership practices and crisis management applied at moderate levels. The study found a strong positive correlation between strategic leadership and effective risk management, underlining the importance of leadership in managing crises.

These studies collectively underscore the growing importance of AI in

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enhancing efficiency, reducing delays, improving transparency, and optimizing decision-making in various sectors, particularly in judicial systems during crises.

Previous studies have provided significant insights into the role of artificial intelligence (AI) technologies in enhancing the performance of the judicial system and improving crisis management capabilities within the courts of Southern Palestine. Collectively, the findings indicate that AI contributes to increased operational efficiency, accelerated judicial procedures, and greater transparency and credibility across various judicial functions. Nevertheless, a critical analysis of these studies reveals several research gaps that warrant further investigation.

For instance, while Al-Qudsi and Al-Jamal (2024) reported notable improvements in the speed of case resolution and litigant satisfaction following the integration of AI into judicial processes, their study did not assess the impact of AI on the accuracy of judicial decisions or its effectiveness in addressing complex crisis scenarios. Similarly, Al-Buqaa and Al-Masri (2024) confirmed that AI contributes to improving the efficiency of executing judicial rulings; however, they did not examine the

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social or psychological implications of AI use during crises, which are crucial dimensions in high-stakes judicial environments.

In contrast, Almuslim's (2023) study focused on the application of AI in the educational sector, offering limited relevance to the judicial context. This highlights the need for domain-specific research that considers the unique operational challenges within the judiciary. Moreover, Al-Saqi and Abu-Khalaf (2023) emphasized the enhancement of litigation service quality through AI technologies but did not investigate their application in urgent or crisis-driven judicial settings, where immediate responsiveness is critical.

Other contributions, such as the study by Al-Shaer and Al-Darwish (2023), demonstrated that AI increases transparency and credibility in judicial procedures. However, the long-term implications of these improvements during major judicial crises remain unexplored. In the administrative domain, Ahmad (2022) revealed the potential of AI in enhancing the precision of administrative decision-making, but his study did not address the judiciary specifically, nor did it examine crisis-related scenarios.

Furthermore, while the study by Al-Jabari and Al-Najjar (2022) affirmed AI's role in addressing complex legal cases, it did not consider AI's efficacy

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in responding to abrupt or unforeseen judicial crises. This omission underscores a broader gap in the literature concerning AI's role in crisis prediction, management, and real-time decision-making within the judicial system.

Taken together, these gaps suggest a compelling need for future research to explore the role of AI in predicting, managing, and mitigating complex and sudden judicial crises in the Palestinian context. Investigating AI’s capacity to enhance the accuracy of judicial decisions and its responsiveness to emergent legal challenges could offer valuable contributions to the development of a more resilient and adaptive judicial system.

2.2. Significance of Study

The significance of this study is twofold—practical and scientific. On the practical level, the relevance of the research is underscored by the professional backgrounds of the researchers: one holds a bachelor’s and master’s degree in management and serves as the Director of Administrative Affairs in the courts of Southern Palestine, while the others possess academic qualifications in computer science and management and occupy key administrative and academic roles. This collective expertise has

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highlighted the practical importance of exploring how artificial intelligence (AI) techniques can be employed in crisis management within the judicial system of Southern Palestine. AI offers advanced technological solutions that streamline crisis response processes, minimize time and resource expenditure, and support accurate and timely decision-making. Moreover, AI contributes to strengthening transparency and security, which in turn enhances public confidence in judicial institutions. From a scientific standpoint, this study seeks to enrich academic literature on the application of AI in judicial crisis management by addressing existing knowledge gaps. It provides a robust theoretical and practical framework for understanding AI's potential to improve institutional responsiveness to crises. Furthermore, the research offers a valuable foundation for developing effective, AI-driven crisis management strategies that can enhance operational efficiency and institutional resilience amid increasing systemic challenges.

2.3. Study Questions

1- What is the level of artificial intelligence usage in the courts of southern Palestine?

2- What is the level of crisis management in the courts of southern

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Palestine?

3- Is there a statistically significant role of artificial intelligence in crisis management in the courts of southern Palestine?

The research questions addressed in this study are fundamental to examining the impact of artificial intelligence (AI) technologies on crisis management within the courts of Southern Palestine. These questions play a critical role in elucidating the relationship between AI and crisis response mechanisms in the Palestinian judicial context. The first question investigates the extent to which AI technologies are utilized in the courts—a key indicator of technological integration in a judicial system often constrained by outdated infrastructure and limited resources. Understanding this aspect is essential for assessing the courts' readiness to adopt and implement modern technological solutions. The second question explores the current state of crisis management in the judicial sector, an area of particular importance given the systemic challenges the courts face, including resource scarcity, administrative inefficiencies, and socio-political pressures. This question aims to evaluate the effectiveness and responsiveness of the judicial system in navigating such crises. The third question examines the relationship

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between AI and crisis management, seeking to determine whether AI technologies meaningfully enhance the courts' ability to manage and respond to crises. Addressing this question offers valuable scientific insights and may inform the development of innovative, technology-driven strategies to improve the efficiency and resilience of the judicial system in the face of complex and evolving challenges.

3. Methodology and Procedures

To conduct the current study, the descriptive-analytical method was used, as it is considered the most appropriate approach for this type of research.

3.1. Study Population and Sample

The study population includes all employees in the courts of southern Palestine, totaling (399) employees according to statistics from the High Judicial Council and the Office of the Chief Justice. A simple random sample was selected, targeting all employees in the courts of southern Palestine in 2024. A total of (320) valid questionnaires were retrieved for analysis, achieving a response rate of 80.2% from the study population. The following table shows the distribution of the study sample according to demographic variables.

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The research sample was selected from all employees of the courts in southern Palestine to provide a comprehensive and accurate representation of all functional and administrative levels influencing crisis management in these courts. This selection underscores the importance of including perspectives from a diverse group of individuals within the judicial system, ranging from judges to administrative staff, to ensure an integrated study that accounts for various roles and responsibilities. The use of a simple random sampling method enhances the credibility of the results by reducing bias and ensuring that every individual in the population has an equal chance of being included. The high response rate (80.2%) adds statistical strength to the findings, reflecting significant interest and awareness among participants regarding the study's subject matter. This approach highlights the rigorous scientific methodology employed to achieve precise and generalizable results for courts in southern Palestine while considering the demographic distribution of the sample to facilitate in-depth data analysis.

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Table 1: Distribution of sample members according to demographic variables

Variable	Category	The Number	Percentage
sex	Male	220	68.8%
	Female	100	31.2%
	Total	320	100.0
The Age	Less than 35 years	140	43.8%
	Between 35-50 years	150	46.9%
	More than 50 years	30	9.3%
	Total	320	100.0
Years of Experience	Less than 5 years	30	9.4%
	Between 5-10 years	160	50.0%
	More than 10 years	130	40.6%
	Total	320	100.0
Qualification	Master's degree or higher	110	34.4%
	Bachelor's	180	56.3%
	Diploma	30	9.3%
	Total	320	100.0
Specialization	Scientific	110	33.4%
	Literary	220	66.6%
	Total	320	100.0
Do you use any AI technologies?	Yes	90	28.1%
	No	230	71.9%
	Total	320	100.0

3.2. Study Tools

To achieve the study's objectives, the researchers prepared a questionnaire that was constructed and developed with the help of theoretical literature and previous studies. The questionnaire consisted of (51) items distributed across two main sections. The first section, which focuses on artificial intelligence, includes (36) items and is divided into the following

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dimensions: (use of AI technologies, utilization of big data, decision support, and reduction of work stages and completion time in the court). The second section, which focuses on crisis management, consists of (15) items.

3.3. Inter-rater reliability

The study instruments were submitted to four expert reviewers, and subsequent modifications, additions, and deletions were implemented based on the feedback received from the reviewers. Additionally, the statistical validity of the tool was assessed by calculating the Pearson correlation coefficient for each study item in relation to its total score, as illustrated in the table below:

Table 2: Results of the Pearson correlation coefficient between each item of the study and the total score.

Item Number	Correlation coefficient (R)	Statistical significance	Item Number	Correlation coefficient (R)	Statistical significance
Artificial Intelligence					
The use of artificial intelligence technologies					
1	0.591**	0.00	6	0.601**	0.00
2	0.661**	0.00	7	0.611**	0.00
3	0.627**	0.00	8	0.622**	0.00
4	0.687**	0.00	9	0.634**	0.00
5	0.798**	0.00	10	0.765**	0.00
The use of big data					
11	0.455**	0.00	16	0.691**	0.00
12	0.503**	0.00	17	0.533**	0.00

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13	0.794**	0.00	18	0.744**	0.00
14	0.681**	0.00	19	0.651**	0.00
15	0.575**	0.00	20	0.566**	0.00
Decision support					
21	0.647**	0.00	26	0.625**	0.00
22	0.758**	0.00	27	0.715**	0.00
23	0.557**	0.00	28	0.520**	0.00
24	0.656**	0.00	29	0.635**	0.00
25	0.645**	0.00	30	0.643**	0.00
Reducing the stages and time required to complete tasks in the court					
31	0.512**	0.00	34	0.446**	0.00
32	0.529**	0.00	35	0.656**	0.00
33	0.635**	0.00	36	0.563**	0.00
Crisis Management					
37	0.556**	0.00	45	0.643**	0.00
38	0.513**	0.00	46	0.641**	0.00
39	0.741**	0.00	47	0.768**	0.00
40	0.679**	0.00	48	0.654**	0.00
41	0.540**	0.00	49	0.673**	0.00
42	0.647**	0.00	50	0.793**	0.00
43	0.654**	0.00	51	0.842**	0.00
44	0.613**	0.00			

**** Statistically significant at ($0.01 \geqslant \alpha$)**

The findings presented in Table 2 demonstrate that all correlation matrix values between the domain items and the overall domain score are statistically significant. This signifies the robust internal consistency of the scale items, providing evidence for the validity of the tool in accurately measuring the intended constructs.

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3.4. Reliability

The data illustrated in Table 3 reveals that the Cronbach's alpha reliability coefficient values for all dimensions of the scale and the overall scale score were notably high.

Table 3: Cronbach's Alpha Reliability Coefficients

Variables	Item Numbers	Cronbach alpha Reliability Coefficients
Artificial Intelligence	36	0.965
Crisis Management	15	0.946
Total Degree	51	**0.965**

3.5. Statistical Processing

The analysis of the study data was conducted following the application of tools to the sample members. Statistical analyses were performed using the Statistical Software Package for the Social Sciences (SPSS). The data were processed through the extraction of frequencies, relative weights, arithmetic means, standard deviations, Cronbach's alpha test, Pearson correlation coefficient, t-test, and one-way analysis test.

The use of statistical methods in this research significantly contributes to analyzing the data in a scientific and systematic manner, enhancing the credibility of the results and providing accurate insights into the

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relationships between the studied variables. The analysis begins with frequency extraction, which is a fundamental method for examining data distribution and identifying prevailing trends among the sample members, facilitating the understanding of recurring phenomena. Relative weights are also used to analyze the importance of each factor or response relative to the overall group, helping to identify key points that influence the results. Additionally, the arithmetic mean is an important tool for determining the overall direction of the data and enhances the understanding of general trends among the sample responses. The standard deviation further strengthens this understanding by measuring the dispersion around the mean, helping to identify the variability and stability of the data. Cronbach's Alpha test is used to ensure the internal consistency of the research tools, enhancing the credibility of the instrument in data collection. Pearson's correlation coefficient is also used to determine the relationship between different variables, aiding in testing the research hypotheses about the role of artificial intelligence in crisis management. The t-test helps compare the means of independent groups to check for statistically significant differences between them, while One-Way ANOVA allows for understanding the

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differences between more than one group. Overall, these statistical methods are essential for analyzing the data accurately and reliably, contributing to providing clear scientific conclusions about the relationship between artificial intelligence and crisis management in the Palestinian judiciary.

4. Results and Discussion

The first question is framed as follows: What is the level of artificial intelligence usage in the courts of southern Palestine?

Table 4: Mean Averages and Standard Deviations for the Level of Artificial Intelligence Usage in Southern Palestinian Courts. (n=320)

Paragraph	Mean	Standard Deviation
Use of Artificial Intelligence Techniques	2.30	0.66
Use of Big Data	2.71	0.79
Decision Support	3.15	1.14
Reduction of Process Stages and Time in Court Proceedings	3.46	1.05
Artificial Intelligence	2.91	0.75

The data presented in Table 4 indicate that the level of artificial intelligence (AI) use in the courts of Southern Palestine is moderate, with an overall mean of 2.91 and a standard deviation of 0.75.

Table 4 shows that the domain of reducing process stages and time in court proceedings ranked first, with a mean of 3.46 and a standard deviation of 1.05. The domain of decision support came in second, with a mean of

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3.15 and a standard deviation of 1.14. The domain of big data usage was third, with a mean of 2.71 and a standard deviation of 0.79. Lastly, the domain of using AI techniques had a mean of 3.30 and a standard deviation of 0.66.

The second question is framed as follows: What is the level of crisis management in the courts of southern Palestine?

To answer the second question, the means and standard deviations for the level of crisis management in the courts of Southern Palestine were calculated, as shown in Table 5.

Table 5: The means and standard deviations for the level of crisis management in the courts of Southern Palestine. (n=320)

Paragraph	Mean	Standard Deviation
Employees are directed appropriately during crises.	3.06	1.25
The presence of strategic alliances enhances the ability to confront crises.	2.94	1.17
The court utilizes alternative systems during crises.	2.81	1.19
There are pre-prepared plans for anticipated crises and their possible scenarios.	2.78	0.96
Experts and specialists from outside the court are consulted to address crises.	2.63	1.05
The court sets clear objectives to achieve when a crisis occurs.	2.50	1.20
There is oversight and follow-up on the implementation of crisis management plans.	2.47	1.00
A trained team is responsible for managing crises.	2.38	1.02
An archive of previous crises is available, detailing how they were handled and resolved.	2.38	1.05

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An early warning system is in place to prevent crises before they occur and to prepare for effective response when they happen.	2.34	1.14
The court regularly updates its crisis management plan.	2.31	1.16
The authorities and responsibilities of the crisis management committee are clear and documented.	2.19	1.24
Effective training programs are available to confront crises.	2.19	0.98
The crisis committee meets regularly and properly documents its meetings.	2.10	0.98
A dedicated budget is allocated for dealing with crises.	2.09	0.98
Crisis Management	2.47	0.82

The data presented in Table 5 indicates that the level of crisis management in the courts of Southern Palestine is moderate, with an overall mean score of (2.47) and a standard deviation of (0.82).

It is evident from Table 5 that the statement "Employees are directed appropriately during crises" ranked first with a mean score of (3.06) and a standard deviation of (1.25). The statement "The presence of strategic alliances enhances the ability to confront crises" ranked second with a mean score of (2.94) and a standard deviation of (1.17). The statement "The court utilizes alternative systems during crises" ranked third with a mean score of (2.81) and a standard deviation of (1.19). On the other hand, the statement "A dedicated budget is allocated for dealing with crises" received a mean score of (2.09) and a standard deviation of (0.98), followed by the statement

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"The crisis committee meets regularly and properly documents its meetings" with a mean score of (2.10) and a standard deviation of (0.98).

Table 6: The results of the Pearson Correlation demonstrate the role of artificial intelligence in crisis management within the courts of Southern Palestine.

Relations		Crisis Management
Utilization of Artificial Intelligence Techniques	R value	0.219**
	Statistical Significance	0.000
Utilization of Big Data	R value	0.519**
	Statistical Significance	0.000
Decision Support	R value	0.354**
	Statistical Significance	0.000
Reducing Phases and Time for Task Completion in the Court	R value	0.241**
	Statistical Significance	0.000
Artificial Intelligence	R value	0.404**
	Statistical Significance	0.000

*** Statistically significant at a significance level of (α≤0.01), * Statistically significant at a significance level of (α≤0.05).*

The data presented in Table 6 indicate a statistically significant role of artificial intelligence in crisis management within the courts of Southern Palestine, with a statistical significance value of (0.000), which is statistically significant. The correlation coefficient value reached (0.404), indicating a moderately positive and statistically significant role of artificial intelligence in crisis management within these courts.

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The data also reveal a statistically significant role for the use of AI techniques in crisis management within the courts of Southern Palestine, with a statistical significance value of (0.000), which is statistically significant. The correlation coefficient was (0.219), suggesting a low positive but statistically significant role of AI techniques in crisis management within these courts.

Furthermore, the data show a statistically significant role for the use of big data in crisis management within the courts of Southern Palestine, with a statistical significance value of (0.000), which is statistically significant. The correlation coefficient reached (0.519), indicating a moderately positive and statistically significant role of big data in crisis management within these courts.

Additionally, the data indicate a statistically significant role for decision support in crisis management within the courts of Southern Palestine, with a statistical significance value of (0.000), which is statistically significant. The correlation coefficient was (0.354), indicating a moderately positive and statistically significant role of decision support in crisis management within these courts.

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Finally, the data show a statistically significant role for reducing the stages and time of work completion in the courts in crisis management within the courts of Southern Palestine, with a statistical significance value of (0.000), which is statistically significant. The correlation coefficient reached (0.241), indicating a moderately positive and statistically significant role of reducing work stages and time in crisis management within these courts.

5. Conclusion and Recommendations

This study explores the critical role of artificial intelligence (AI) in enhancing crisis management within the judicial system, focusing specifically on the Courts of Southern Palestine. It provides a unique contribution to the literature by addressing a sector that has received relatively limited attention in previous AI-related research, which has predominantly focused on fields such as education, business, and healthcare. The study positions the judicial system as a vital domain where AI technologies can contribute significantly to institutional efficiency, responsiveness, and resilience during crises.

Empirical findings from the study reveal a moderate positive correlation (R

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= 0.404) between the application of AI technologies and the effectiveness of crisis management in the courts. Among the various AI applications, the use of big data analytics demonstrated a higher correlation (R = 0.519), indicating its substantial influence on crisis preparedness and strategic planning. In contrast, other AI techniques showed a weaker, though still positive, correlation (R = 0.219). These findings underscore the differentiated impact of various AI tools and highlight the need for a targeted approach in adopting and integrating AI within judicial operations.

The study further indicates that the level of AI utilization in the Courts of Southern Palestine is moderate, with an average score of 2.91 (SD = 0.75). Notably, the AI-driven reduction of procedural stages and time required for completing court-related tasks was found to have the most significant operational impact, followed by decision-support applications and big data tools. These findings suggest that even partial adoption of AI tools can yield measurable efficiency gains, though the full potential of AI remains underutilized.

In terms of crisis management effectiveness, the study recorded a moderate level, with an average score of 2.47 (SD = 0.82). Key strengths included the

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ability to direct staff effectively during crises and the formation of strategic partnerships to enhance organizational adaptability. However, critical weaknesses were observed in areas such as budgeting for crises and the institutionalization of crisis management practices, such as holding regular committee meetings. These gaps point to the need for a more structured and proactive crisis management strategy within the judicial framework.

The study's practical implications are significant. AI technologies were shown to expedite judicial processes, reduce task completion times, and improve decision-making accuracy and objectivity under crisis conditions. Big data analytics, in particular, offered valuable strategic insights that could enhance foresight and preparedness. Nonetheless, the integration of these technologies into the judicial workflow remains partial and fragmented. Challenges include financial limitations, technological infrastructure gaps, and organizational resistance to change—particularly among employees unaccustomed to digital tools.

From a policy and strategic perspective, the findings call for deliberate efforts to foster the adoption of AI across various judicial functions. Policymakers should consider allocating resources toward AI

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infrastructure—particularly in big data and decision-support systems—and invest in specialized training for judges and administrative staff. This would not only improve crisis responsiveness but also raise the overall quality and credibility of judicial services.

On a broader political and institutional level, improved crisis management through AI integration can lead to higher transparency and accountability, fostering public trust in the justice system. Furthermore, strengthening judicial resilience can mitigate political instability resulting from legal delays and systemic inefficiencies. If implemented successfully, the Palestinian judicial system could serve as a model of digital transformation in governance, offering lessons for both regional and global justice reform initiatives.

Despite the promising findings, the study is constrained by its geographical focus on the Courts of Southern Palestine, limiting the generalizability of the results. Financial and technical barriers, along with cultural and administrative resistance, further hinder the widespread implementation of AI technologies. Overcoming these limitations will require a combination of capacity-building, resource mobilization, and cultural change management

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strategies to promote digital acceptance and sustainability.

Based on the results, several key recommendations are proposed to enhance the role of AI in judicial crisis management:

1- Promote Advanced AI Techniques: Encourage the use of advanced AI tools such as machine learning and predictive analytics to boost crisis response effectiveness.

2- Strengthen Data Management: Improve data collection and analytical capabilities to ensure robust and accurate decision-making.

3- Enhance AI Decision Support: Develop interactive and responsive decision-support systems that offer real-time guidance during crises.

4- Implement Comprehensive Training: Conduct intensive training programs for court personnel to ensure proper AI utilization.

5- Build Strategic Partnerships: Foster collaborations with AI experts and technology institutions to access cutting-edge solutions and expertise.

6- Establish Evaluation Mechanisms: Create regular assessment frameworks to monitor AI effectiveness in crisis scenarios and update practices accordingly.

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These strategic measures aim to bolster the judiciary's resilience and responsiveness, ensuring greater institutional stability and preparedness for future disruptions.

For future research, it is recommended to expand the scope of study to other regions in Palestine to validate the findings across a broader context. Further investigation is also needed to evaluate the individual impact of specific AI tools, explore the correlation between AI and public trust in the judiciary, assess the economic viability of AI adoption, and understand employee resistance to technological change. Additionally, the use of simulation modelling is advised to test AI’s effectiveness in managing complex and unpredictable judicial crises, thereby offering a more comprehensive understanding of its potential and limitations.

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