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Challenges in Implementing Electronic Management at the Ministry of Health within the Libyan Government

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ABSTRACT

Objectives: The study aims to identify the most important obstacles to the implementation of electronic management in the office of the Ministry of Health in the Libyan government from the point of view of employees, according to the following obstacles: (administrative, financial, technical, and human).

Background: The world has witnessed progress in services increasingly, including health services because importance is an important pillar for achieving the well-being of society to measure the progress of countries, health services have become a priority program for countries in general, as they include organizing and providing service to all levels of the health system, there must be a successful health management And effective, with modern management concepts that enable workers to achieve their goals efficiently and effectively for all segments of society.

Methodology: Cross-sectional data was used; the study population was represented by workers in the office of the Ministry of Health in the Libyan government, which consisted of (36) workers. The statistical package for the social sciences (SPSS) was used to analyze the questionnaire data.

Results: The results of the study also showed that the most obstacles to the application of electronic administration were administrative and then human obstacles.

Conclusions: The main issue at the Ministry of Health in Libya is poor training for electronic management, financial problems, weak technology connections, staff confusion, and administrative and human-related barriers.

Recommendations: Based on the study results, we suggest these steps: Train health workers in Libya to switch to electronic management through specialized courses; hold workshops to address concerns and improve understanding of electronic management; review laws conflicting with electronic administration policies; and ensure IT professionals facilitate electronic management implementation.

Keywords: Electronic management, Ministry of Health, obstacles, employees, SPSS.

INTRODUCTION

The world has witnessed progress in services increasingly, including health services because of their importance and is an important pillar for achieving the well-being of society to measure the progress of countries, health services have become a priority program for countries in general, as they include organizing and providing service to all levels of the health system, there must be successful health management And effective, with modern management concepts that enable workers to achieve their goals efficiently and effectively for all segments of society (Al-Qunti, 2015).

In the case of applying the concept of electronic management in the modern scientific way, we find that it facilitates the procedures within the institutions and thus provides the beneficiaries to save time in the various administrative transactions and ensures accuracy and objectivity in the completion of operations within the institution (Al-Samli and Al-Sulaiti, 2008).

Electronic management is a fast means of technology that serves all developed and non-developed countries. The implementation of electronic management helps in providing health services and taking advantage of the advantages of time and cost (Ben Saleh and Bou Qalqoul, 2018).

The rapid growth in technology and the power of the Internet has led to a high power in the global environment, especially in health services, which has led to a significant impact on the infrastructure of the current global economy (Thunaibat, 2014). The good effect has been on the performance of workers. Electronic hospital management also offers the advantages of simplified and high-quality procedures for workers. In this field, patient service is tracked (Jardim, 2013).

The medical field has increased greatly on electronic management within hospitals to meet the growing needs of the population, as electronic management helps doctors and staff in the hospital and spreads to everyone the highest level of quality and efficiency (Kumar and Kosalram, 2013).

Through the development of the introduction to the research, there are some obstacles to the implementation of electronic management, for example, a shortage of human resources with multiple technical skills, as well as the lack of sufficient internet, expansion of institutions, absence of appropriate legislation, and the advancement of electronic management towards its implementation in the management of health services, where we find several obstacles to the implementation Electronic management.

The Problem of the Study: The activation of electronic management in the health services sector is one of the important pillars of raising the level of effectiveness and efficiency of the institution and a turning point from traditional administrative work to electronic administrative work. And also to ensure scientific and sound outputs, and this is what led to the development of traditional administrative work to electronic administrative (Radwan, 2004).However, despite the great importance of this sector, the implementation of electronic management faces several obstacles, most notably administrative, human, technical and financial. This study seeks to clarify these obstacles to the importance of developing and developing health services through the implementation of electronic management.

What are the most prominent obstacles to the implementation of electronic management in the Ministry of Health in the Libyan government?

1.2 Objectives of the Study: This study seeks to achieve the following objectives; 1) Knowing the most prominent obstacles and challenges that prevent the implementation of electronic management in the Ministry of Health in the Libyan government; and2)The research presents recommendations that we hope to activate and implement electronic management.

1.3 The importance of Studying: This study derives its importance from the importance of the subject of electronic management, which includes all components of management, including planning, implementation, follow-up, evaluation and motivation, but it is distinguished by its ability to produce knowledge and raise the level, tool and quality of the health sector or services to achieve goals. Moreover, derives its importance as a new addition to the field of scientific knowledge. There is a scarcity of studies that deal with the Libyan environment and that attempt to identify the obstacles to implementing electronic management in the Ministry of Health in the Libyan government from the point of view of workers.

1.4 Study Population: This study included employees of the Ministry of Health in the Libyan government.

1.5 The Limits of the Study:
Spatial limitations: The application of this study was limited to the Libyan Ministry of Health in the Libyan government.

Objective Limits: This study focused on identifying the most prominent obstacles and challenges that prevent the implementation of electronic management in the Ministry of Health in the Libyan government from the point of view of employees through the following obstacles: (administrative, technical, human and financial) and identifying the most prominent mechanisms through which they can be overcome. these constraints.

Human Limitations: This study was limited to workers in the Ministry of Health in the Libyan government.

Time Limits: This field study was conducted from 7/2/2023 to 7/15/2023.

LITERATURE REVIEWS

Studying Obstacles to the Application of Electronic Management in Human Resources Management in the City of Makkah Al-Mukarramah Through the Perspective of Human Resources Officials and Employees (Al-Masoudi, 2010).

The objective of the study was to identify the barriers to implementing electronic management in human resources, including human, administrative, financial, and technical obstacles. The study involved 100 individuals selected from managers and employees in a stratified random manner. Statistical methods such as arithmetic means, standard deviations, chi-square analysis, and Pearson correlation coefficient were used. The study found that electronic management faced administrative obstacles predominantly, followed by financial, human, and technical obstacles.

Entitled Obstacles to the Application of Electronic Management in Palestinian Universities(Al-Hasnat, 2011)**.**
The purpose of the study was to explore the concept of electronic administration and its practical requirements in Palestinian universities. It highlighted the challenges hindering the implementation of electronic management in the administration of Palestinian universities in the Gaza Strip, encompassing organizational, technical, human, and financial obstacles. The study employed a descriptive survey approach and utilized a questionnaire as a data collection tool. The sample size consisted of 220 administrative staff members, selected using a random stratified method, representing 38% of the administrative community. Statistical methods were used to analyze the sample, revealing that the substantial adoption of electronic management led to financial, human, organizational, and technical barriers.

The Role of E-Management in Raising the Quality of Health Services (Abdel and Abbas, 2018)**.**
The research aimed to explore the concept of electronic management and its impact on the quality of health services at Canadian Teaching Hospital. The study utilized statistical methods to analyze the research sample data and yielded significant results. One notable finding was the importance of implementing electronic management as a fundamental aspect of the organization's operations to effectively improve the quality of health services and align with the organization's objectives, vision, and mission.

Entitled Obstacles to the Application of Electronic Management in the Health Services Sector, A Case Study of the Public Hospital Institution Abd al-Razzaq Bou Hara–Skikda(Ben Saleh and Bou Qalqoul, 2018)**.**
In this research paper, the goal was to identify the main obstacles hindering the implementation of electronic management at the public hospital institution Abd al-Razzaq Bou Hara in the state of Skikda. The study involved surveying the opinions of administrative, medical, and semi-medical staff at the hospital. To gather data, a questionnaire was used with a sample of 44 individuals, and the data was analyzed using the Statistical Package for the Social Sciences (SPSS). The analysis involved calculating arithmetic means, conducting variance analysis, and using T-tests to compare averages. The findings indicated that administrative obstacles were the most prominent barriers to implementing electronic management at the hospital institution Abdel-Razzak Bou Hare Skikda.

Entitled Obstacles to the Application of Electronic Management in the Faculty of Arts, Sabratha University (Al-Qahwash, 2020)**.**
The study aimed to identify the obstacles to the application of electronic management in the Faculty of Arts at the University of Sabratha. To achieve this, a questionnaire consisting of five sections was designed, including personal data, administrative obstacles, technical obstacles, financial obstacles, and human obstacles. The results were presented in percentages, arithmetic mean, and alpha coefficient. The research found administrative obstacles such as weak support from the Ministry of Higher Education for the policy of electronic management. Technical obstacles included a lack of specialists in maintaining devices. Human obstacles involved the lack of awareness sessions for the concept of electronic management. Financial obstacles included the lack of financial support for electronic management and a shortage of specialized experts.

Entitled Obstacles to the Application of Electronic Management in the Department of Health Services, Derna(Jibril, 2020)**.**
The study aimed to identify the key obstacles that hinder the implementation of electronic management in the Department of Health Services in Derna from the perspective of employees. It found that the main obstacles were human, financial, administrative, and technical. The study involved 89 employees and used a case study approach to achieve its objectives. The study determined that the level of obstacles to the implementation of electronic management in health services management was moderate. The results concluded that the primary obstacles to the implementation of electronic management were of a human nature.

METHODOLOGY

We utilized the descriptive analytical method for the study due to its suitability to the nature of the research. The study was focused on all employees of the Ministry of Health in the Libyan government, totalling 70 in number.

A questionnaire was employed as the data collection tool, consisting of two parts. The first part gathered general data such as gender, age, educational level, years of service, and number of training courses related to electronic management at the Ministry of Health. The second part was the Electronic Administration Obstacles Scale, comprising twenty-eight statements measured on a Likert scale of five grades.

The study was initially intended to be carried out at the Benghazi Health Services Administration. However, due to objections from the acting director, the location of the study had to be changed.

Out of the 70 workers in the study population, 55 questionnaire forms were distributed, and 36 completed forms were collected, representing a reliable percentage of 51% for statistical analysis. The study's findings are detailed in Table 1.

Table 1: Weights and Degrees of Study According to the Five Likert Scale

Likert Scale Description	Likert Scale	Likert Scale Interval
Strongly disagree	1	1.00 – 1.80
Disagree	2	1.81 – 2.60
Neutral	3	2.61 – 3.40
Agree	4	3.41 – 4.20
Strongly agree	5	4.21 – 5.00

RESULTS

Statistical Methods Used: We used the statistical program SPSS to analyze the data collected from the study questionnaire. The following methods were used:

1) Frequencies and percentages to describe the characteristics of the study community and determine their responses.
2) Mean and standard deviation to determine the importance of the responses from the study population members.

4.1 Analysis of Personal Data

This section involves the analysis of the study population's demographic characteristics.

Table 2: Distribution of the population members by gender.

Gender	Frequency	Per cent
male	23	63.9
female	13	36.1
Total	36	100.0

Table 2 indicates that 64% of the participants were male, and 36% were female. This is further illustrated in Fig. 1.

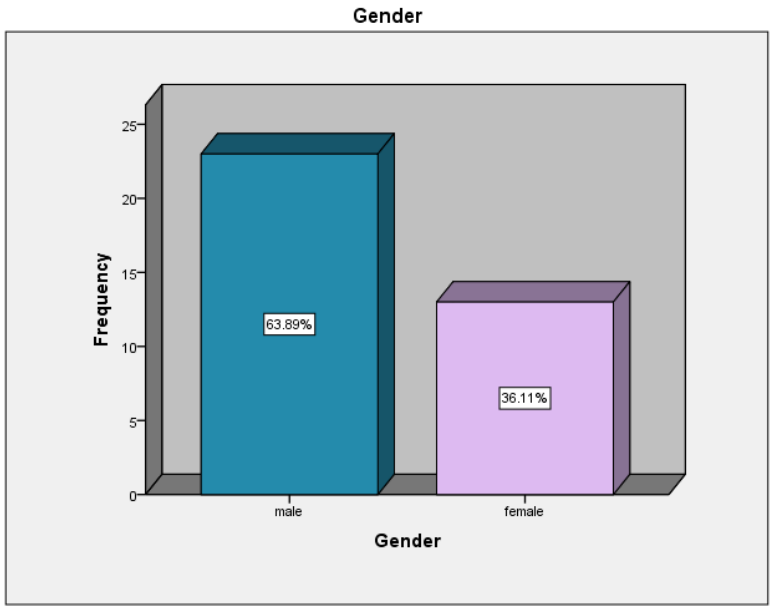

Figure 1: Distribution of population members by gender.

Table 3: Distribution of the population members by age.

Age	Frequency	Per cent
less than 35 years old	17	47.2
from 35 - 40 years old	3	8.3
from 41 - 45 years old	6	16.7
from 46 - 50 years old	7	19.4
from 51 years and more than old	3	8.3
Total	**36**	**100.0**

In Table 3, it is evident that the largest percentage of the population falls within the age bracket of under 35 years, accounting for 47% of the population. On the other hand, the lowest percentage is found in the age groups of 35-40 and over 51 years, both standing at 8%. This information is further visualized in Fig. 2.

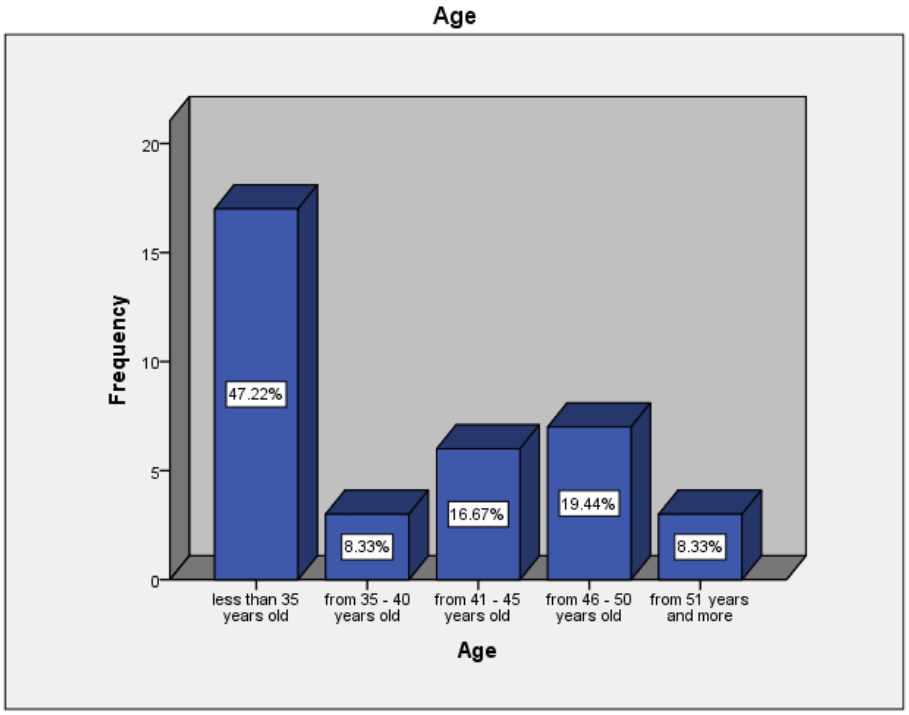

Figure 2: Distribution of population members according to age.

Table 4: Distribution of the population's educational qualification.

Level of education	Frequency	Pecontent
High school	2	5.6
Diploma	4	11.1
Higher Diploma	1	2.8
Bacheloris	20	55.6
Master	9	25.0
Total	**36**	**100.0**

Table 4 indicates that the majority of the population holds a bachelor's degree, accounting for 55% of the population, while the minority possess a preparatory qualification, constituting only 3.4%.

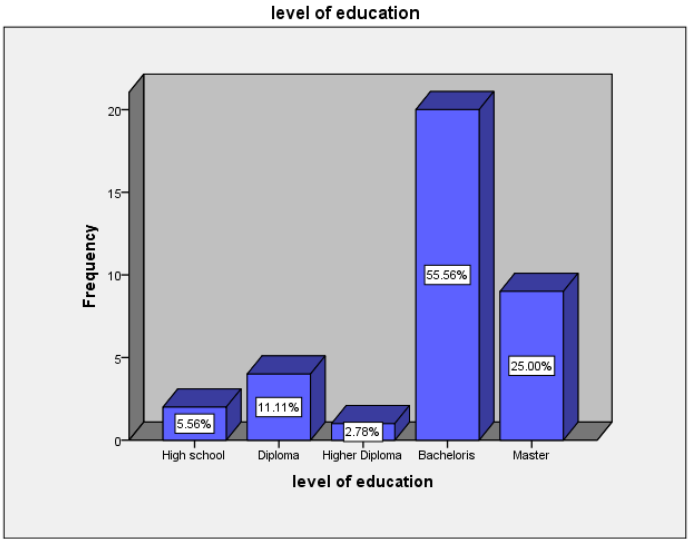

Figure 3: Distribution of the population according to scientific qualification.

Table 5: Distribution of population members according to years of experience.

years of experience	Frequency	Per cent
less than 5 years	9	25.0
from 5 - 10 years	8	22.2
from 11 - 15 years	3	8.3
more than 15 year	16	44.4
Total	**36**	**100.0**

Table 5 indicates that the highest number of years is 15 years or more, representing 44% of the total, while the lowest percentage is for 11-15 years, at 8%.

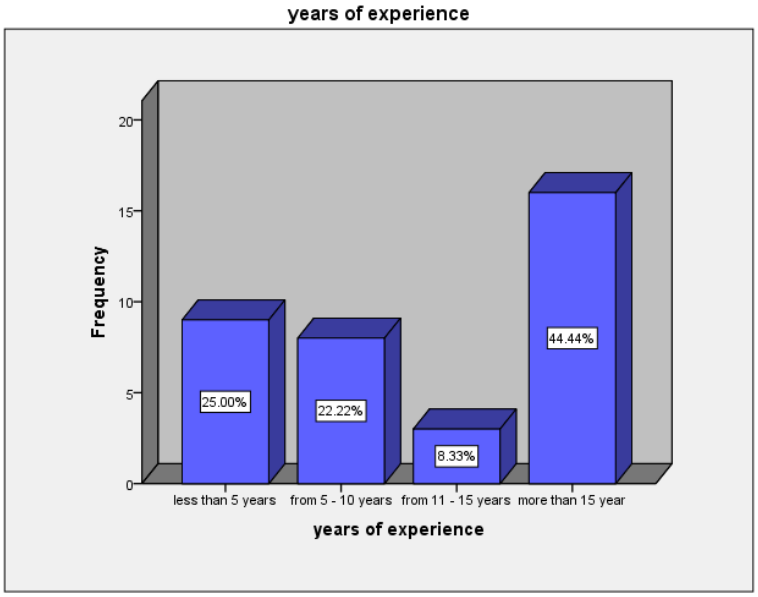

Figure 4: Distribution of population members according to years of experience.

Table 6: Distribution of Population Members according to the Number of Training Courses that Specialize in Electronic Management.

The number of training courses that specialize in electronic management	Frequency	Percent
I have not attended any training course	19	52.8
One training course	7	19.4
Two training course	4	11.1
More than two training	6	16.7
Total	**36**	**100.0**

Table 6 shows that the largest percentage in the training data is "I have not attended any training course" at 52%, followed by "two training courses" at 11%.

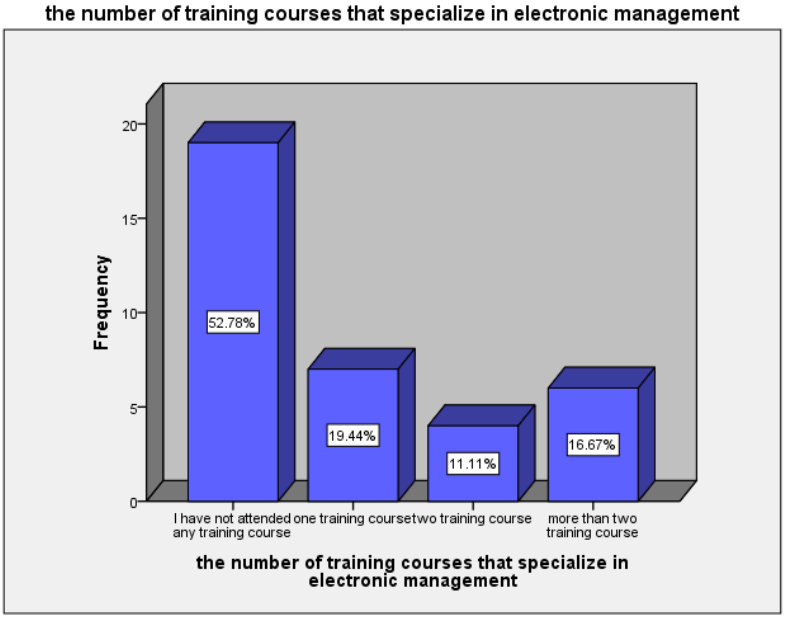

Figure 5: Distribution of the population by the number of training courses that specialize in electronic management.

4.2 Analysis of obstacles to implementing electronic management

Table 7: The Opinions of the Population Members about Administrative Obstacles.

Statement	Strongly disagree q (%)	Disagree q (%)	Neutral q (%)	Agree q (%)	Strongly agree q (%)
Absence of strategic planning for the shift towards electronic management	2 (5.6%)	1 (2.8%)	2 (5.6%)	19 (52.8%)	12 (33.3%)
Lack of training courses and workshops in the fields of computers and electronic management	2 (5.6%)	5 (13.9%)	2 (5.6%)	19 (52.8%)	8 (22.2%)
Failure to attract and select qualified human resources in the field of electronic management applications	1 (2.8%)	1 (2.8%)	2 (5.6%)	16 (44.4%)	16 (44.4%)
Leaders in health services management believe that electronic management may Threaten their job positions	0 (0.0%)	4 (11.1%)	12 (33.3%)	9 (25%)	11 (30.6%)

Not seeking the assistance of experts in planning the application of electronic management	1 (2.8%)	3 (8.3%)	3 (8.3%)	15 (41.7%)	14 (38.9%)
The weakness of the senior management is conviction in managing health services in the feasibility of applying electronic management	0 (0.0%)	3 (8.3%)	7 (19.4%)	17 (47.2%)	9 (25%)
Weak government support (legislation) for electronic management applications	1 (2.8%)	1 (2.8%)	1 (2.8%)	18 (50%)	15 (41.7%)
Mean = 3.9960 Std. Deviation = 0.58801					

It is clear from Table 7: Administrative obstacles Previously, it was clear that there is a statistically significant difference at the highest level (agree) with a rate of 52.8% and at the lowest level (strongly disagree) with a rate of 0.0%. The arithmetic average reaches 3.9960.

Table 8: The Opinions of the Population Members about Financial Obstacles.

Statement	**Strongly disagree q (%)**	**Disagree q (%)**	**Neutral q (%)**	**Agree q (%)**	**Strongly agree q (%)**
Failure to provide a sufficient budget for the application of electronic management	6 (16.7%)	7 (19.4%)	3 (8.3%)	11 (30.6%)	9 (25%)
Insufficient financial allocation for the maintenance of devices and equipment	4 (11.1%)	11 (30.6%)	4 (11.1%)	10 (27.8%)	7 (19.4%)
Scarcity of financial incentives in the field of electronic management	2 (5.6%)	4 (11.1%)	6 (16.7%)	17 (47.2%)	7 (19.4%)
Lack of financial capabilities in the field of seeking help from experts and consultants	5 (13.9%)	9 (25%)	5 (13.9%)	12 (33.3%)	5 (13.9%)
The high cost of devices and equipment needed to implement the project	3 (8.3%)	11 (30.6%)	10 (27.8%)	9 (25%)	3 (8.3%)
Mean = 3.2167 Std. Deviation = 1.02581					

In Table 8, it is evident that financial barriers are present. Previously, it was evident that there exists a statistically significant difference at the highest level (agree) at a rate of 47.2% and the lowest level (strongly disagree) at a rate of 5.6%. The average value is 3.2167.

Table 9: The Opinions of the Population Members, about Technical Obstacles.

Statement	**Strongly disagree q (%)**	**Disagree q (%)**	**Neutral q (%)**	**Agree q (%)**	**Strongly agree q (%)**
Lack of equipment necessary for the application of electronic management	2 (5.6%)	12 (33.3%)	7 (19.4%)	12 (33.3%)	3 (8.3%)
Lack of software necessary for the application of electronic management	1 (2.8%)	11 (30.6%)	6 (16.7%)	14 (38.9%)	4 (11.1%)
Lack of technologies necessary for the application of electronic management	2 (5.6%)	12 (33.3%)	7 (19.4%)	12 (33.3%)	3 (8.3%)
The rapid development of related hardware and software is an area son for delaying the application of electronic management	2 (5.6%)	16 (44.4%)	12 (33.3%)	5 (13.9%)	4 (11.1%)
The lack of accurate and integrated databases for the application of electronic management	2 (5.6%)	6 (16.7%)	4 (11.1%)	14 (38.9%)	10 (27.8%)
Poor electronic link between the administration and its departments	1 (2.8%)	2 (5.6%)	4 (11.1%)	20 (55.6%)	9 (25%)
The health services department does not have a communication network that can transmit information very quickly	1 (2.8%)	4 (11.1%)	7 (19.4%)	19 (52.8%)	5 (13.9%)
Lack of maintenance and follow-up programs for devices and equipment within the health services department	2 (5.6%)	7 (19.4%)	5 (13.9%)	19 (52.8%)	3 (8.3%)
Limited internet availability in the administrative unit	1 (2.8%)	8 (22.2%)	5 (13.9%)	18 (50%)	4 (11.1%)
Lack of confidence in the effectiveness of the security and protection of information in the electronic administration	4 (11.1%)	12 (33.3%)	6 (16.7%)	12 (33.3%)	2 (5.6%)
Mean = 3.3250 Std. Deviation = 0.71888					

The technical challenges are clearly shown in Table 9. It was previously evident that there is a statistically significant difference at the highest level (agree) by 55.6% and at the lowest level (strongly disagree) by 2.8%. The average value is 3.3250.

Table 10: The Opinions of the Population Members obstacles to Humans.

Statement	**Strongly disagree q (%)**	**Disagree q (%)**	**Neutral q (%)**	**Agree q (%)**	**Strongly agree q (%)**
Poor knowledge of workers in the English language used in electronic management applications	1 (2.8%)	5 (13.9%)	6 (16.7%)	18 (50%)	6 (16.7%)
The ambiguity of the concept of electronic management among some employees of the Department oHealth Serviceses	1 (2.8%)	6 (16.7%)	6 (16.7%)	21 (58.3%)	2 (5.6%)
The existence of a psychological barrier for employees that prevents them from using electronic management	1 (2.8%)	7 (19.4%)	7 (19.4%)	19 (52.8%)	2 (5.6%)
Lack of specialized personnel in information and communication technology and computer maintenance	1 (2.8%)	15 (41.7%)	10 (27.8%)	7 (19.4%)	3 (8.3%)
The lack of experience and skills in dealing with the Internet among its employees	1 (2.8%)	10 (27.8%)	8 (22.2%)	16 (44.4%)	1 (2.8%)
Poor support of managers in the health services department for the electronic management project	1 (2.8%)	4 (11.1%)	5 (13.9%)	18 (50%)	1 (2.8%)
Mean = 3.5556 Std. Deviation = 1.23956					

In Table 10, it is evident that human obstacles are a significant factor. There is a statistically significant difference of 58.3% at the highest level (agree) and 2.8% at the lowest level (strongly disagree). The average reaches 3.5556.

Table 11: Descriptive Statistics for the Four Axes of Obstacles to Implementing Electronic Management.

Descriptive Statistics	**Q**	**Mean**	**Std. Deviation**
Administrative obstacles	36	3.9960	.58801
Financial obstacles	36	3.2167	1.02581
Technical obstacles	36	3.3250	.71888
Human obstacles	36	3.5556	1.23956
Total	**36**	**3.5233**	**.67099**

From the above, it is evident that the average difficulty score for implementing electronic management is 3.5233. By comparing this average with the scores for each obstacle, we can see that the obstacles rank in the following order: administrative highest, followed by human, technical, and financial.

DISCUSSION

A study mentioned by Al-Masoudi in 2010 revealed that obstacles to electronic management exist predominantly in this order: administrative, financial, human, and technical hurdles.

Discussing studies on electronic management implementation, Al-Hasanat'sstudy in 2011 highlighted significant obstacles in this order: financial, human, organizational, and technical challenges.

Furthermore, a study by Bin Saleh and BouQalqoulin 2018 found that most obstacles in electronic management are administrative. However, our study encompasses administrative, human, technical, and financial obstacles.

Another study by Al-Qahwashin 2020 emphasized that obstacles in electronic management mainly consist of administrative, technical, human, and financial challenges. Our study aligns similarly with obstacles categorized as administrative, human, technical, and financial.

Lastly, Jibril's study in 2020 focused on human obstacles in electronic management. In contrast, our study discussed administrative, human, technical, and financial impediments within electronic management implementation.

CONCLUSION

The research findings are as follows: The main hindrance to implementing electronic management at the Ministry of Health in the Libyan government is the lack of training opportunities in computing and electronic management.

Financial hurdles stem from inadequate incentives for electronic management.

Technical challenges arise from weak electronic connections between the administration and its divisions.

People-related obstacles include confusion about electronic management among some Department of Health Services staff.

The primary barriers to electronic management at the Ministry of Health in the Libyan government are mostly administrative, followed by human-related issues.

RECOMMENDATIONS

Based on the study results, we propose the following steps for consideration: The Ministry of Health within the Libyan government should train workers to shift from traditional to electronic management through specialized courses and involvement at various administrative levels.

Conduct workshops and meetings to address concerns and promote understanding of electronic management concepts.

Address barriers conflicting with public policies on electronic administration by enhancing related laws and regulations governing administrative systems.

Ensure the availability of IT professionals and management experts tasked with overseeing the implementation of electronic management processes.

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