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The Role of Information in Disaster Management "Case Study on Disaster Management in the General Directorate of Civil Defense of Jordan"

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Abstract

this study aimed to determine the role of information in disaster management operations and to highlight the goals such as "clarification the role of information in crisis and disaster management and the necessity to provide information for the correct and appropriate decisions", This study is an applied study on disaster management in the General Directorate of civil defense of Jordan, the questionnaire was adopted as the main tool of survey ,the study sample consisted (60) employee from the department of disaster management. the descriptive was used through Review of previous studies on the same subject, Been using the statistical package for the social sciences in addition to descriptive and statistical methods for tabulating data and processed to achieve the study objectives and hypothesis testing set Key findings of the study "there is a clear impact on the work of disaster management in the State provide accurate, clear, comprehensive and fast information, with a high degree of completion of the works without errors." The researcher also made a series of recommendations, including the role of information and studies on this topic and the need to train workers in disaster management on how to deal with information of her employments in the correct format.

Key words: Civil defense; Disaster management; Information; Jordan

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INTRODUCTION

The flow of information is the mean key to the survival and continuation of the work of the organizations, it is a great importance to the work of disaster management/ Jordanian civil defense to get accurate and clear information with a high-quality and it should available in a timely manner. The information is a global phenomenon worth of study as a powerful tool in the management processes, the governments and security organizations attached special attention for being an influential element in the success of the organization's goals. As a result of increasing disasters and vandalism problems because of the difficulty of the tasks entrusted to the civil defense raised the need to establish a unit of disaster management, which is able to work in any circumstances and to prepare studies and researches on natural and man-made disasters and documenting all related to the information and prevention and control method in conjunction with the management of disaster operations in Jordan in cooperation with stakeholders within and outside Jordan. The researcher believes that the civil defense personnel may encounter problems in response to incidents in the absence of information in the form requested, this is what will discuss it in this study and that came with the title *Role of Information in Disaster Management*.

A. Problem of the Study

The study problem stems from the contrast on the importance of the role of information on civil defense in general and disaster management in particular, in view of the relationship between information and disaster management, the lack of information can lead to a poor planning, lack of responding and dealing with disasters which will not reach the required targets, so the problem of the study is to answer the following key questions:

(a) What is the role of information on the disaster management operations at the civil defense?

(b) What is the effect of compatibility between accuracy, clarity, timing, and comprehensiveness information and perform disaster management?

Figure 1 shows the model study.

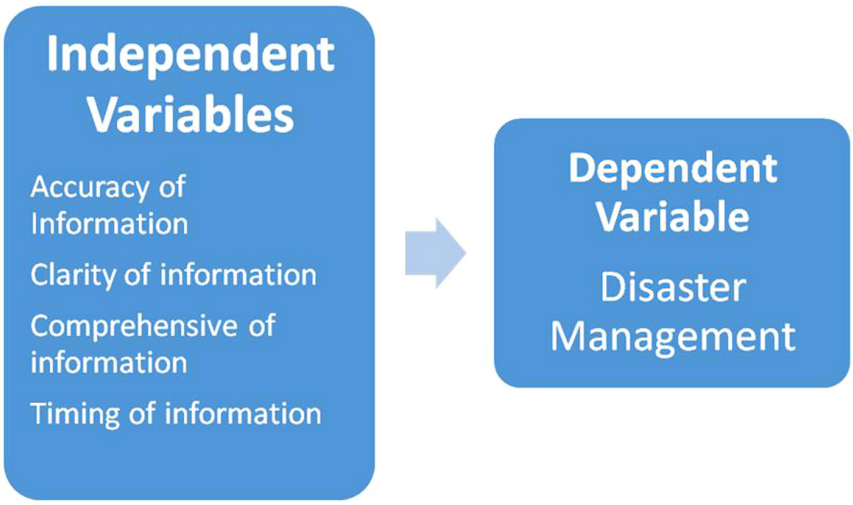

Figure 1
Study Model

B. Importance of the Study

The importance of this study comes to show the roles that can be performed by providing information, interest information is a global phenomenon worth to study as being an effective tool of management processes and it is considered to be an influential element in the successful achievement of the objectives of the Organization.

C. The Objectives of the Study

(a) Explains the role of information on disaster management operations.

(b) Determine the effect of compatibility between accuracy and comprehensiveness and perform disaster management.

(c) Explains the relationship between the efficiency and effectiveness of disaster management information.

D. Study Hypotheses

The main hypothesis

Ho: There is no statistically significant effect on the role of information in disaster management.

From the main hypothesis there are sub-hypotheses as following:

Ho1: There is no statistically significant impact on the accuracy of the information used in disaster management operations.

Ho2: There is no statistically significant impact on the clarity of information used in disaster management operations.

Ho3: There is no statistically significant effect of comprehensive information in disaster management operations.

Ho4: There is no statistically significant effect of speed timing information in the work of disaster management operations.

1. THEORETICAL FRAMEWORK

There is no longer any doubt that the information has become today a major new resource for any organization, regardless of the nature of its activity, size or ownership, information is in fact either human resources or material resources became for contemporary business organizations as a base on which it depends for its work under the changing and complex business environmental which is surrounding the Organization's on a currently or on a future. The flow information is the rationale basic for the decision making process for modern management and a weapon used by human In the face of life's challenges over the centuries, and no doubt there is variation from era to era and from society to other on the investment and use of information .The information is the result of processing the data by subject it to a certain calculations or logical or of some statistical methods or for some analysis, installation and clearance, through simulations, these operations may be carried out manually or by computer (Elian, 2012).

1.1 The Importance of Information

The importance information raised through the undeniable role in all aspects of the activity, it is an essential for scientific research as well as a necessary resource for industry and development of economic and administrative affairs, military, and political, arguably that any organization possesses information can become more powerful. There are now companies on the various activities of the integrated management information systems designed to help managers and provide them with information that makes it easy to make the right decisions and this applies to political, engineer and lawyer… etc. (Abdul Hadi, 1993, p.198) summarizes the importance of information on the following:

(a) Develop the capacity of the State to benefit from available information and experience obtained in other countries.

(b) Rationalization and coordination of efforts of State in the research and development area in the light of the available information.

(c) Ensuring a broad knowledge base on solving problems.

(d) Provide alternatives and modern methods of solving technical problems and tests to reduce these problems in the future.

(e) Upgrade the efficiency and effectiveness of operational activities in the sectors of production and services.

(f) Ensure the right decisions in all sectors at different levels of responsibility.

1.2 The Concept of Information in Disaster Management

It is a collection of facts and concepts that belong to any of the topics to develop and increase human knowledge (Salmi, 2012) and by (Al-Shami, 1988) defines the information that it is essential in any control system, it refers to data that have been processed to become meaningful to set out and make sense. We believe that information is the data that is set to become more useful to the individual and it has value which change the expected outcome of attitudes that are used ,it is also the formulated data in a meaningful way as a basis for decision-making (Salem, 2001), data is a disorganized ore facts that have no meaning it needs to organize and handle to turn it into meaningful information (Turin, 2005) also information play a prominent role in the life of modern organizations nowadays especially in areas of decision making, optimization of resources Human, technological, material and substantive objectives in its continuity and resilience in a changing environment characterized by highly competitive (Hamshari, 2008). NDMA (2012) explained that providing information to all the stakeholders in disaster management, mainly in emergency save and relief operation for the disaster of exaggerated people.

1.3 Types of Information

There are many different types and kind of information that needed by the researcher, which is the essential element in researches and studies by (Salmi, 2012) including:

(a) Information knowledge is information that ends with a knowledge indicators helping management in decision-making and the completion of work or project, such as the decision to appoint an officer or buy new machines.

(b) Development information: Its information needed for administrative development, capacity development and expanding awareness in work and life for example training courses.

(c) Educational information: information you need management to educational institutions such as universities.

(d) Production information: the information on applied research, development of means of production. exploitation of natural resources and the potential for a better way such as production of a certain good.

1.4 Information Resources

All means or channels or containers used to transport the information from the sender to the receiver (the beneficiary) to meet the individual's need from the information, whether for educational, research purposes, news, information, cultural or entertainment (Samerai, 2004) and is divided as follows:

(a) Secondary sources: Data is collected and processed in former times by others and were circulated to be ready for use by individuals or organizations at any time from these sources the data in reference books, periodicals, magazines, Publishing houses and research centers.

(b) Primary sources: Data is collected and processed on request, tested and disseminated by the need for such information, or to set up these sources personal observers, patent and experience survey.

(c) Bank information: Information is compilation through much information associated with each other and stored according to their respective category so they can be retrieved quickly for ease of use.

(d) Internet: Data collected, organized and processed by organizations from all over the world and display on their websites to allow for all circulation and utilization.

1.5 Basic Features of the Information

There are a set of features and characteristics of information (Klick, 2003)

(a) Accuracy is defined as the ratio of correct information to the set produced information during a certain period and attributed the errors in information to human errors.

(b) Clarity any free of contradiction and uncertainty and should be easy to understand the beneficiary.

(c) Inclusively: Means they contain all the information needed by the recipient of the data tables and charts.

(d) Relevance: Means any suitable to the needs of beneficiaries, the value of the produced information increases more as increasing on the degree of saturation of the beneficiary.

(e) Rightness: The information should be correct because it affects the type of decision which builds based on that information.

(f) Unbiased: The information are inherently neutral if distorted or manipulated in it.

(g) Speed: Means intended to provide information in a short time with accuracy and clarity.

2. DISASTER MANAGEMENT

It is a management style for facing disaster, the impact of it has a special nature, distinguishes it from other management styles , it is a range of activities, functions and procedures exercise before, during, and after disasters to face it in different stages with a view to preventing the occurrence and recurrence whenever possible and minimize or reduce the damage when they occur and remove its effects after the fact and termination a disaster science appeared as a new pattern of thinking and implementation and was not confined to a particular threat or event but branched roots into spheres of social, economic, educational, scientific, political, and it must be noted that the human and material losses caused by natural disasters and man-made continuously increasing and will likely continue to grow and the losses are measured in several ways, depending on the number of the dead or wounded or losses of properties.

2.1 The Importance of Studying the Disaster

Highlights the importance of the study disaster management as a result of the increasing effects of hazards and disasters registered across the world and this increase may be due to the following reasons (Alzahrani, 1997):

(a) Population growth, leading to an increase in the number of individuals exposed to dangers.

(b) Changes in the natural environment intended for slope level environment leading to broader dangers.

(c) Climate change impacts on the natural environment and agricultural and economic systems.

(d) Movement of large numbers of people to the urban areas and near beaches, especially to large cities.

(e) Inappropriate land use and inappropriate application standards for planning, design and construction.

2.1.1 The Concept of Disaster

Many definitions of disasters including

Those harmful or disastrous events for human and property interests and has resolved it in the areas of his residential or may be in areas free of people, but there is a special interests in it also he cares too much in its existing as benefiting directly or indirectly or benefiting may be planned in the future (Arbab, 2002).

Or it is the "sudden event often by nature threatens the national interests of the country and upset the natural balance of things and participate for facing it from all the various devices State" (Ali Maher, 1993).

2.1.2 Characteristics of Disasters

Characteristics of disasters in General and whatever category you fall under several attributes are as follows (Ali Maher, 1993):

The speed and sequence of events

Stress and nervous massive

The lack of data and information

(d) Element of surprise

(e) Conflicting information

At the beginning of the disaster it caused a fall shock and high degree of tension affecting the potential response for it (Abdullah, 2006). The attributes of the consequences of the disaster appear chaotic and dysfunctional in the public system Al-Garni, 2005).

2.1.3 Disaster Management Objectives

Objectives of disaster management are as follows (Al-Garni, 2005):

(a) Full and permanent readiness for various disasters in achieving a degree of coordination between all relevant authorities in disaster.

(b) Take all necessary measures and precautions to prevent or reduce cons disasters or minimize their effects.

(c) Optimal use of national resources.

(d) Prevent duplication of tasks by defining the roles and responsibilities of each requirement of the disaster.

(e) Ensuring control in all phases of disaster management

(f) Determining the real needs for relief and rescue.

(g) Provide general information about the risks of a bear from or may occur as a result of disasters.

(h) Achieving International cooperation if the size of the disaster much needed international assistance.

2.2 Phases of Disaster Management

Most of the researchers collected the phases of disaster management consists of three phases:

The first phase: Pre disaster is an important stage which means taking action before the disaster occurs, to prevent or mitigate impacts at the degree which acceptable on a society (Momani, 2012). The following procedures should take:

(a) Planning (forecasting/prediction) of potential disasters in the short/medium/long range.

(b) Preparation plans and scenarios to prevent and respond to disasters.

(c) Preventive actions for disaster prevention.

(d) Willingness to handle events such as personnel training and equipment maintenance.

(e) Cultural awareness in disaster management, and training workshops to improve the efficiency of employees in disaster.

(f) Development of monitoring and early warning mechanisms in the area of disaster management whenever possible.

(g) Processing operating room to disaster management with appropriate communication devices.

Second phase: Confrontation during a disaster is the second phase of the disaster management and enterprise readiness or intended state to deal with risks, whether natural or man-made (Moumni, 2012). The procedures include the following (http://www.agr.alexu.edu.eg \crisis-management-unit-and-disaster.aspx):

(a) Implementation plans and scenarios previously developed and trained in it.

(b) Acts of confrontation and relief of all kinds according to the type of disaster.

(c) The urgent emergency services.

(d) Implementation evictions operations if necessary.

(e) Follow the event and the continuous developments, assessment and identification of actions required to deal with it through the operating room.

The third phase: post disaster begins this phase after the end of the danger and ending after the return to the situation that existed before the risk means the stage that evaluate the main and secondary risks resulting from exposure to danger, which does not pose a threat to persons, property and then when there is a replace feeling for a quick response and save lives and property to the feeling that need for reconstruction and infrastructure services and return the society to daily life before the disaster (Moumni, 2012). The procedures include the following:

(a) Inventory losses in personnel and property.

(b) Rehabilitation and reconstruction (restart phase) and protection against potential future threats.

(c) Evaluation of the measures taken to deal with the disaster during the phase response, containment and come out with learned lessons.

(d) Documenting the event and provide recommendations and proposals to the authorities concerned to take advantage of them in order to avoid the negative in the future (if any).

(e) Develop and update plans for innovations for better management.

2.3 Disaster Management in the General Directorate of Civil Defense of Jordan

Disaster management was formed on 2 March 1993, it is the link between the General Directorate of civil defense and governmental and non-governmental institutions at the local, regional and international activities of those organizations in the disaster area where the many achievements which are documented with many of these bodies and organizations.

2.4 Vision of the Management

Upgrade work to reach an advanced level in managing the disaster to prevent or reduce losses resulting from various kinds of disasters as possible.

2.5 Message of the Management

Managing duties with efficiency, professionalism and creativity in collaboration with all partners concerned.

2.6 Duties of Management

Duties and responsibilities assigned to the Department of disaster:

(a) Preparation of studies and research on natural and man-made disasters and documenting information, and identify ways of prevention and work in coordination with the administration of disaster operations in Jordan in cooperation with stakeholders within and outside Jordan.

(b) Inform the Supreme Council for the defense of civil and disaster and updates him on the important topics on its agenda in its meetings.

(c) Coordination and cooperation with all authorities and community locally and internationally on all things concern disaster management, response and remove their effects.

(d) Readiness exercises to deal with disasters in coordination with operations management and the participation of the civil defense committees in the administrative units.

(e) Technical supervision for the readiness for the hazardous materials teams and the search and rescue team.

(f) Cooperation with the training department to develop training programs for emergency teams for special work dealing with disasters.

(h) Coordination with the centre of crisis management in the armed forces for sharing plans to deal with emergencies during disasters and defining roles and responsibilities of each party.

(i) Collection disaster information and dissemination between formal and informal institutions in cooperation with the Department of public relations at the General Directorate of civil defense.

(j) Preparation and follow-up of bilateral and multilateral international conventions parties for civil protection and disaster cooperation and activating agreements. (The General Directorate of Jordan Civil Defence, 2016)

3. PREVIOUS STUDIES

A study (Yahiaoui, 2013) entitled *the Role of Marketing Information System to Improve the Sales of Small and Medium-Sized Enterprises" —A Case Study of the Southern Institution of GMS-Algeria*. The study amid at identify the marketing information system and its role in improving the sales of small and medium-sized enterprises, as well as to identify relationships between variables of the study by showing the role and importance of information marketing in addition to show reality using small and medium-sized enterprises of marketing information system and determine the importance of the latter in improving sales particularly through case study. We reached the marketing information system provides information that help the enterprise to seize opportunities and resolve problems that hinder and help carry out sales planning and control, and the great southern Mills Foundation relies on marketing information system is the use of traditional means and manual in addition to the information system to support the information and communication technologies and programs which contribute to the collection of information and even

irregular basis, processing, storing and sharing both within and outside the institution, in addition to the lack of interest in marketing intelligence Help their vigilance on the external environment, and not used to the system strengthening marketing decisions, but they have Only it's own internal records system which contributes to the provision of data on production, marketing and finance, which will have a role in improving their sales.

A study (Suleyman, 2010) entitles *Role of Information in Collective Action in Dynamic Disaster Environments*. This study explored the major issues facing collective response operations after destructive earthquakes. The small case study design employs qualitative and quantitative methods to investigate the decision-making process in a context of seismic risk to exemplify how public managers can utilize information and communication systems to ensure collaborative actions in managing an extreme event. Fifty-eight semi-structured interviews with 39 key decision-makers and researchers and content analyses of daily reports comprise the main data sources. The study compares and contrasts the Turkish disaster management system following the Marmara and Duzce earthquakes of 1999. It addresses whether the use of information and communication technologies significantly affected its performance. The study's findings reveal that difficulties in accessing and exchanging timely and accurate disaster-relevant information inhibited coordination during the Marmara response while increased communication functions improved coordination and search-and-rescue activities during the Duzce response.

A study (Lars, 2008) entitles Crisis Management & Information Technology in the study focused on how companies prepare themselves for the crisis that can affect information technology within the businesses, and what types of crisis they are worrying about. To answer these questions a theoretical framework is formulated by reviewing a collection of crisis management literature. The theory is later compared with empirical findings to reveal differences and similarities. The empirical work is based on interviews with four managers that work with IT and is involved in the crisis management process. Three international enterprises with head offices in the Öresund region participates. The findings of this research show that the differences between theoretical and empirical work are limited, and the similarities are many. Both explain that gathering experts and decision-makers in a crisis management team that can point out possible critical scenarios and construct action-plans, is a key part of crisis preparation. Alternative ways of communication must be prepared, and user training helps the people involved feel safe and know what to do when a critical situation occurs. All plans and responsibilities must be reviewed frequently so that they always are up-to date, old plans are of little help. Crisis preparation has to be motivated. It takes time and is costly. The second part of the thesis looks at what kind of IT related crisis companies' worries about. This includes loss of communication such as email and intranet, failure of advanced information systems like ERP, and threats from malware and hackers. But the all agree that the biggest threat comes from inside the companies—the employees. Big resources are therefore spent on making the IT users more concerned about safe use of company technology. This research contributes to the field of crisis management and shows that the growing use of information technology in businesses demands focusses. Preparation and planning are the first step in avoiding a crisis from happening.

A study (Sapan, 2013) *Information Technology: Roles, Responsibilities in Disaster Management*. This study showed the development of information technology in the Internet, geographic information systems, remote sensing, satellite communications, so on, helps to assist in the planning, implementation process of risk reduction. Geographic information systems have sufficient capacity and capability to improve the quality and the power of the analysis, the natural hazard assessment, to guide the development of activities as well as assist in the planning of the mitigation measures and implementation of the emergency preparedness for response. Remote sense, however, as a powerful tool that can help you to identify areas of risk, monitoring plan, so that the change in a real-time. Information Technology is playing a big as well as vital role in disaster management. It provides all the required to anticipate, analyze to find the correct solution Just in Time. GIS, remote sensing, other IT tools are available, are being used by different competent authorities for this purpose. Disaster Management is nowdays a buzz word. Every country, their government, other organizations are working hard to make use of Information Technology in all possible ways to tackle the problems of disaster.

4. METHODOLOGY OF THE STUDY

The researcher has been using descriptive analytical based on data collection, compilation, analysis and link among certain through the questionnaire and this approach depends on the interpretation of the situation and identify the circumstances and relationships between variables, it also goes beyond the descriptive collection data on the phenomenon to analysis, interpretation of that data and draw conclusions from them.

4.1 Study Population

The study population was limited to the disaster management at Directorate of Jordanian General of civil defense.

4.2 Sample

It is a partial withdraw from the population study to study them, it has been selected a random sample representative

of the population of the study as the sample withdrawn 60 individuals.

4.3 Statistical Analysis

Statistical treatment data have been tabulated and processed using SPSS program also use the level function (0,0 5) and the calculated value and the indexed value in testing assumptions, and to employ data collected for the objectives of the study and testing the hypotheses they do use statistical methods descriptive.

4.4 Variables of the Study

Depends on two variables:

The first: Variable/independent variable is information in terms of accuracy, clarity, comprehensive and speed (time) the overall questions 16 paragraphs.

The second: Variable/ dependent variable of a disaster management in terms of preparedness, prevention, response, warning of the risk and provides communication system the overall questions of 12 paragraphs.

The two variables was measured by using the Likert scale shown in the table below:

Table 1
Likert Scale User as a Survey Tool

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

5. RESULTS OF THE STUDY

5.1 Independent Variable: Information

5.1.1 The First Dimension: Accuracy

Table 2
Mean, Standard Deviations and the Importance of Accuracy

Variable	Number	Paragraph	Mean	Standard deviations	Degree of importance	Rank
Accuracy	1	The accuracy of information verification the disaster management requirements	4.6000	0.59052	High	1
	2	With accurate information, the better disaster management procedures	4.4000	0.63246	high	2
	3	The discovery of warning depends on feature accuracy of information	4.3250	0.61550	High	4
	4	The accuracy of the information is a good indicator for disaster management	4.3250	0.57233	High	3
		Overall index	4.4125	0.6027	High	

The sample had positive trends towards the above paragraphs so that the mean greater than averaged over performance measurement (3) and the overall index 4.4125 where uploaded (1) highest importance and which provides "the accuracy of information verification the disaster management requirements" with mean (4.6000) and a standard deviation of 0.59052 and paragraph (3) a lowest high degree of importance to the mean (4.3250) and (0.61550) standard deviation.

5.1.2 The Second Dimension: Clarity

Table 3
Means, Standard Deviations and the Importance of Clarity

Variable	Number	Paragraphs	Mean	Standard deviations	Degree of importance	Rank
Clarity	1	Clearly information makes it more useful for employment in the work of disaster management	4.4500	0.67748	High	1
	2	Order and clarity of the information leads to easy use and put it in the integrated scales	4.4000	0.59052	high	2
	3	Willingness and protection depends on the clarity of the information	4.2250	0.61966	High	4
	4	The clarity of information helps to give the best results	4.2500	0.77625	High	3
		Overall index	4.3313	0.49156		

Table 3 shows that the sample had positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.3313 and standard deviation of 0.49156, where paragraph (1) is the highest importance while paragraph (3) a lowest high degree of importance.

5.1.3 The Third Dimension: Comprehensive

Table 4
Means, Standard Deviations and the Importance of Comprehensive

Variable	Number	Paragraphs	Mean	Standard deviations	Degree of importance	Rank
Comprehensive	1	The information give a clear picture and available alternatives for disaster management	4.4000	0.63246	High	3
	2	The work of the management is influenced by the comprehensiveness and completeness of the information	4.2250	0.61966	High	4
	3	There is a comprehensive information on topics of the plans and procedures for disaster management	4.4000	0.63246	High	2
	4	The comprehensive gives a high degree of the completeness of the work without errors	4.5000	0.59914	High	1
		Overall index	4.3813	0.42361	High	

Table 4 shows that the sample had positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.3813 and standard deviation of 0.42361, where paragraph (4) is the highest importance while paragraph (2) a lowest high degree of importance.

5.1.4 The Fourth Dimension: Speed (Timing)

Table 5
Means, Stander Deviations and the Importance of Timing

Variable	Number	Paragraphs	Means	Stander deviations	Degree 0f importance	Rank
Timing	1	Attention must provide information in the right time and when you need it	4.3750	0.66747	High	3
	2	The information must be available to the decision maker before an awkward position	4.4000	0.63246	High	2
	3	The information is useful at present but is not useful after that	4.2000	0.72324	High	4
	4	Speed of information reduces time and stress for a business application	4.5000	0.55470	High	11
		Overall index	4.3688	0.47362		

Table 5 shows that sample had positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.3688 and standard deviation of 0.47362, where paragraph (4) is the highest importance while paragraph (3) a lowest high degree of importance.

5.2 The Disaster Management Dependent Variable

5.2.1 The First Dimension: Preparedness, Prevention

Table 6
Means, Stander Deviations and the Importance of Preparedness and Prevention

Variable	Number	Paragraphs	Means	Stander deviations	Degree of importance	Rank
Preparedness and prevention	1	Preparedness and prevention from disaster reduces the size of fear and anxiety in individuals	4.4000	0.74421	High	2
	2	Disaster preparedness makes individuals able to alleviate difficulties caused by disasters	4.2750	0.74421	High	3
	3	You must provide educational programs for individuals on how to prevent disaster to avoid future occurrence	4.5500	0.63851	High	1
		Overall index	4.4083	0.54688	High	

Table 6 shows that the sample had positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.4083 and standard deviation of 0.54688, where paragraph (3) is the highest importance while paragraph (2) a lowest high degree of importance.

5.2.2 The Second Dimension: Response

Table 7
Means, Stander Deviations and Degree of Importance of Response

Variable	Number	Paragraphs	Means	Standard deviation	Degree of importance	Rank
Response	1	Disaster response reduces the volume of threats to life and property	4.4000	0.63246	High	2
	2	Provides procedures to respond to all hazards relieves and reduces the impact of risk	4.5750	0.59431	High	1
	3	Effective disaster response requires continuous evaluation of the situation and know the capabilities of individuals and information	4.2500	0.70711	High	3
		Overall index	4.4083	0.53636		

Table 7 shows that had sample positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.4083 and standard deviation of 0.53636, where paragraph (2) is the highest importance while paragraph (3) a lowest high degree of importance.

5.2.3 Third Dimension: The Warning of Risks

Table 8
Means, Stander Deviations and Degree of Importance of Warning From Risks

Variable	Number	Paragraphs	Means	Stander deviations	Degree of importance	Rank
Warning from risks	1	Providing the information to the managers and individuals can predict impending risk of preparedness	4.4000	0.63246	High	2
	2	You can use the information contained in the site to anticipate disaster warning	4.3500	0.66216	High	3
	3	Modern technology such as remote sensing can provide various information to risk warning	4.5000	0.64051	High	1
		Overall index	4.4167	0.50496	High	

Note that the sample had positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.4167 and standard deviation of 0.50496, where paragraph (3) is the highest importance while paragraph (2) a lowest high degree of importance.

5.2.4 The Fourth Dimension: Provide a Communication System

Table 9
Means, Stander Deviations and the Degree of Importance of Provide a Communication System

Variable	Number	Paragraphs	Means	Stander of deviations	Degree of importance	Rank
Provide a communication system	1	Provide internal and external communication system helps to provide information and early warning	4.5250	0.64001	High	1
	2	A widely telecommunication system can allow a different organizations to exchange information and deal effectively with disaster	4.3500	0.66216	High	3
	3	Modern of communication is the most important used to support decision-making in disaster management	4.4500	0.63851	High	2
		Overall index	4.4417	0.51963	High	

Table 9 shows that the sample had positive trends towards the above paragraphs so that the mean is greater than over averaged performance measurement tool (3) and the overall index 4.4417 and standard deviation of 0.51963, where paragraph (1) is the highest importance while paragraph (2) a lowest high degree of importance.

6. TESTING HYPOTHESES

Ho.: There is no statistically significant effect of the availability of information on disaster management.

Table 10
Result of the Main Hypothesis Test

Result	*FD*	*R*2	*R*	*T* SIG	*F* indexed	*F* calculated
Rejection	4\35	0.737	0.859	0.00	2.69	24.576

Table 10 shows the multiple regression results, the value of the calculated *F* equals (24.576) greater than the value of the indexed 24.576 accordingly reject Ho nihilism value and accept the alternative hypothesis, Ha, show that there is a statistically significant impact of the role of information in disaster management, it turns out that the value of the correlation coefficient amounted

to 85.9% and the coefficient of determination is 73.7% which means that 73.7% of the variation in the availability of information due to changes within the disaster management and the relationship is positive and strong between the two variables .

6.1 The First Sub-Hypothesis

Ho1: There is no statistically significant impact on the accuracy of the information used in disaster management operations.

Table 11
The Result of the First Sub-Hypothesis Test

Result	*FD*	R^2	*R*	*T* SIG	*T* indexed	*T* calculated
Rejection	39	0.516	0.718	0.00	2.0227	6.363

Table 11 shows the simple regression test, the value of the calculated (*T*) of 6.363 is greater than the value of the indexed and therefore we reject the value of nihilism and accept the alternative hypothesis, (Ha) there is statistically significant impact on the accuracy of information used in disaster management.

6.2 The Second Sub-Hypothesis

Ho2: There is no statistically significant impact on the clarity of information used in disaster management operations.

Table 12
The Results of the Second Sub- Hypothesis Test

Result	*FD*	R^2	*R*	*T* SIG	*T* indexed	*T* calculated
Rejection	39	0.446	0.668	0.00	2.0227	5.536

Table 12 shows the simple regression test, the value of the calculated (*T*) 5.536 more than indexed value and therefore we reject the value of nihilism and accept the alternative hypothesis there is a statistically significant impact on the clarity of the information used in disaster management.

6.3 The Third Sub-Hypothesis

Ho3: There is no statistically significant effect of comprehensive information in disaster management operations.

Table 13
The Results of the Third Sub- Hypothesis Test

Result	*FD*	R^2	*R*	*T* SIG	*T* indexed	*T* calculated
Rejection	39	0.588	0.767	0.00	2.0227	7.361

Table 13 Shows the simple regression test, the value of the calculated (*T*) 7.361 is more than indexed value, therefore, we oppose nihilism value if the calculated value is greater than the value of the indexed and therefore we reject the value of nihilism and accept the alternative hypothesis, this means there is a statistically significant effect of comprehensive information used in disaster management.

6.4 The Fourth Sub-Hypothesis

Ho4: There is no statistically significant effect of speed timing information in the work of disaster management operations.

Table 14
The Results of the Fourth Sub-Hypothesis Test

Result	*FD*	R^2	*R*	*T* SIG	*T* Indexed	*T* calculated
Rejection	39	0.597	0.773	0.00	2.0227	7.509

Table 14 shows the simple regression test, the value of the calculated (*T*) 7.509 is more than indexed value, therefore, we oppose nihilism value if the calculated value is greater than the value of the indexed and therefore we reject the value of nihilism and accept the alternative hypothesis, this means there is a statistically significant effect of the speed of information used in disaster management.

CONCLUSION

(a) The study of accurate information verify the requirements of disaster management.

(b) Describes the results of the descriptive analysis of the importance of clear information that makes it more useful for employment in the work of disaster management.

(c) It shows the importance of the comprehensive information with a high degree of completion without errors to avoid it in the future.

(d) The study shows speed (time) of information reduces the time and effort to implement and facilitate the work of disaster management.

(e) The availability of adequate communications systems and the use of modern technology gives high efficiency in the work of disaster management and to provide early warning signals.

(f) The availability of information is the priorities which depend on it the disaster management for any emergency.

(g) There is a relationship between the availability of information and the assess of the achievements of disaster management at the civil defense.

RECOMMENDATIONS

(a) Stress the need to provide clear and accurate information to make the work of disaster management more effective and efficient.

(b) Work on continuity of specialized training in the field of information to individuals involved in disaster management and education on how to use and handle it.

(c) To consolidate the concepts of information quality through continuous improvement and surveys of beneficiaries of the service.

(d) Activation of exchange of the experience at the local and international levels in follow-up to the leading training and provision of information to improve their business and disaster management.

(e) It must be emphasized the need to adhere to the regulations and instructions to disaster management and the need to develop and store information, accuracy and clarity and comprehensiveness and timeliness, practical framework for easy reference if necessary.

(g) Using all new communications technology which gives the speed of the exchange of information and the accuracy and efficiency in the work of disaster management.

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