

The effect of managing by intelligences on the crisis management effectiveness in light of the corona pandemic - a case study of a group of hotels.

أثر الإدارة بالذكاءات على فاعلية إدارة الأزمات في ظل جائحة كورونا - دراسة حالة لمجموعة من الفنادق.

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Abstract:

This study aims to investigate the impact of managing by intelligences dimensions on the effectiveness of the corona pandemic crisis management in the hotels' industry through a survey distributed to 124 employees from 4 hotels: the Marriott Hotel, Protea hotel, Al Rafia` hotel and Al Hussein hotel.

The results found that the effectiveness of the corona pandemic crisis management and the availability of the managing by intelligences dimensions in the hotels under study is high, in addition to a positive correlation and influence relationship between the two variables, moreover, the results indicates that the competitive intelligence primarily affect the effectiveness of the corona pandemic crisis management.

Keywords: managing by intelligences; crisis management; the corona pandemic.

JEL Classification Codes: M10, H12.

ملخص:

تهدف هذه الدراسة الى البحث في أثر أبعاد الإدارة بالذكاءات على فاعلية إدارة أزمة كورونا في قطاع الفنادق من خلال استبانة موزعة على 124 موظف من 4 فنادق: فندق الماريوت، فندق بروتيا، فندق الرفيع و فندق الحسين.

توصلت الدراسة الى أن مستوى فاعلية ادارة أزمة كورونا وتوفر أبعاد الإدارة بالذكاءات في الفنادق محل الدراسة مرتفع، إضافة الى وجود علاقة ارتباط ايجابية ترقى الى درجة التأثير بين متغيرات الدراسة، حيث يؤثر بعد الذكاء التنافسي بالدرجة الأولى على فاعلية ادارة أزمة كورونا في الفنادق محل الدراسة.

كلمات مفتاحية: الإدارة بالذكاءات، إدارة الأزمات، جائحة كورونا.

تصنيفات JEL : M10، H12.

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INTRODUCTION:

By the end of the year 2019, the Corona virus (COVID-19) had spread and led to a worldwide health emergency, the threats of the global crisis have exceeded the health aspect and affected the social and economic aspects due to the precautions measures imposed by most countries to decrease its spread, such as quarantine, suspending international flights, closing many cultural and commercial activities..., this heavily affected the economic activities; one of the most affected industries is the "hotels' industry" as it is based primarily on individuals' mobility and interaction which is forbidden due to the social distance norms, moreover travel bans have caused a decline in the number of clients that affected heavily the hotels' revenues and caused in turn layoffs, salary decrease, and in some cases activity shutdown; this situation have urge the hotels to undertake proper procedures and strategies to ensure an effective management of this global health crisis.

effective crisis management is all about making the right decision at the right time, thus it depend deeply on the humans' intellectual capacity in order to predict, analyze and determine proper strategies to respond to the corona crisis, to that end, managing by intelligences which refers to the use of intelligences' types in decision-making, can contribute to the effectiveness of the corona crisis management, therefore, the main question of this study is as follows:

Does managing by intelligences impact the effectiveness of the corona crisis management?

Given the main question, a set of sub-questions has been developed as follows:

1. The first sub-question:

To what extent is the managing by intelligences dimensions available in the hotels under study?

2. The second sub-question:

How effective is the crisis management of the corona pandemic at the hotels under-study?

3. The third sub-question:

Do the dimensions of managing by intelligences (strategic intelligence, competitive intelligence, emotional intelligence) achieve a significant impact on the effectiveness of the corona crisis management in the hotels under-study?

4. The Fourth sub-question:

Are there statistically significant differences for the study variables among the sample members due to: gender, age, academic qualification, experience, and job position variables at a significant level of 0.05?

- Study hypotheses

In order to address the aforementioned questions, a set of hypotheses has been developed as follows:

Main hypothesis:

Managing by intelligences has a significant impact on the effectiveness of the corona crisis management in the hotels under study at a significance level of 0.05;

This hypothesis is divided as following:

1. The strategic intelligence dimension affects the effectiveness of the corona crisis management in the hotels under-study at a significance level of 0.05;

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2. The competitive intelligence dimension affects the effectiveness of the corona crisis management in the hotels under-study at a significance level of 0.05;

3. The emotional intelligence dimension affects the effectiveness of the corona crisis management in the hotels under-study at a significance level of 0.05;

1. The first sub-hypothesis:

The hotels under study have an average level concerning the availability of the managing by intelligences dimensions;

2. The second sub-hypothesis:

The hotels under study have a high level regarding the effectiveness of the corona crisis management;

3. The third sub-hypothesis:

There are statistically significant differences for the study variables among the sample members due to: gender, age, academic qualification, experience, and job position variables at a significant level of 0.05;

This hypothesis is divided as following:

3.1. There are statistically significant differences between the averages of managing by intelligences of the study sample individuals due to: gender; age; academic qualification; experience; and job position variables at a significance level of 0.05;

3.2. There are statistically significant differences between the averages of the corona crisis management effectiveness among the study sample individuals due to: gender; age; academic qualification; experience; and job position variables at a significant level of 0.05.

- the study objectives:

This study aims at elucidating the “managing by intelligence” concept represented by its three dimensions the strategic intelligence, the competitive intelligence and the emotional intelligence, in addition, the study indicates the factors influencing effective crisis management and investigates how well the hotels are responding to the corona crisis and whether the “managing by intelligences” concept have a significant impact on the effectiveness of the crisis management.

- Importance of the study

The study acquires its importance as it is considered a study that address a current topic that is effective crisis management of the corona pandemic in the most affected industry the hospitality industry specifically the hotels; the study also tackled a new concept which is “managing by intelligences” and investigate it’s possible contribution in ensuring an effective crisis management of the corona pandemic; in addition, this study adds to the academics filed as there is a lack of studies that investigates the relationship or impact of strategic, competitive and emotional intelligence on the effectiveness of crisis management.

- Research Methodology

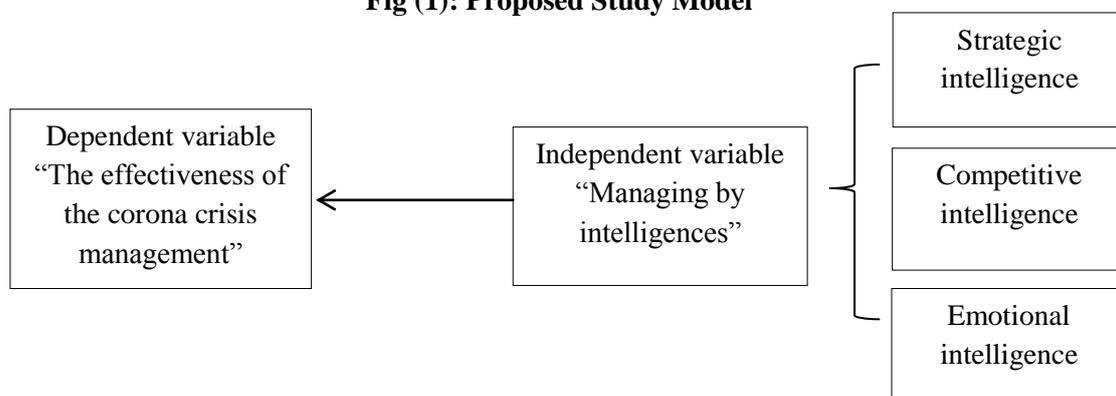
A descriptive and analytical approach was adopted in the theoretical section that allowed presenting the theoretical framework for managing by intelligences and effective crisis management; regarding the practical part, a case study approach was adopted in a group of hotels in Constantine province namely the Marriott hotel, Protea hotel, Al Rafia’ hotel, and el Hussein hotel.

As for the study tool, the survey was used to collect the responses of the study sample that was processed and analyzed using the Statistical Package for social sciences SPSS version 23.0.

- Proposed Study Model

In order to address the problematic and to achieve the study objectives, a hypothetical study model was introduced as shown in the figure below.

Fig (1): Proposed Study Model



Source: Created by the researchers based on the prior studies

- previous studies:

Some studies that investigated the study variables will be presented as follows:

1. The study of (مهاري & سلمان, 2016), journal article entitled “ دور ممارسات ادارة الموارد البشرية في فاعلية ادارة الازمات التنظيمية ”, This study aims to investigate the role of human resources' department practices on the effectiveness of crisis management represented in the speed of decision-making, Communication, information flow, and mobilizing resources using the survey as a study tool which was distributed to a sample of 111 consisted of managers, their assistants, chiefs of departments, managers of branches working at the general directorate for the human resources' department in the Iraqi Ministry of Interior, The study relied on the descriptive and analytical method and found a positive relation and effect between the human resources' department practices and the effectiveness of the crisis management, the study also recommended that the Iraqi Ministry of Interior should construct a Team specialized in constantly monitoring the environment for potential crisis and analyze it before it occurs;
2. The study of (Fleming & Zhu, 2017), journal article entitled “The Role of Corporate Management in an Effective Crisis Management Program”, this study aims to investigate the role of management practices in ensuring the effectiveness of crisis management through a literature review and examples of some organizations, the results indicate the contribution of a proactive crisis management approach in organizational resilience and in encountering a potential crisis in addition to the importance of the managers in preparing their organization for the prevention of crises and to respond and recover effectively from those that do occur, the study also indicated some factors influencing the effectiveness of a crisis management such as quality information and availability, effective crisis communication, leaders who can deal with change;

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3. The study of (مقراش، 2015), phd thesis titled " أثر الإدارة بالذكاءات على التوجه الاستراتيجي " للمؤسسة دراسة حالة شركة الخطوط الجوية الجزائرية", the study aims at investigating the impact of management by intelligences on the strategic orientation of an organization via three intelligence namely strategic intelligence, competitive intelligence and emotional intelligence, using a questionnaire distributed to 175 employees in Algeria Airlines Company, the study concluded that Airlines Company have a high level regarding the three types of intelligence and strategic orientation, in addition to that, the results also found that managing by intelligences has a positive impact on the strategic orientation of the Algeria Airlines Company;
4. The study of (Yaseen, 2020) article titled "The role of strategic intelligence management in enhancing the effectiveness of crisis management: Analytical study of the views of a sample of employees of Al-Hamdania University for the period from 1/11/2017 to 10/4/2018", this study investigated the role of strategic intelligence in ensuring the effectiveness of crisis management presented by its' stapes (early warning signals Detection, Preparedness and prevention, Damage Containment and Reduction, Restore, Learning) using a survey distributed to 56 samples of employees from Al-Hamdania University for the period from 1/11/2017 to 10/4/2018, the study results indicated a statistically significant relationship between the effectiveness of crisis management and the strategic intelligence.

given the previous studies, it is evident that there is a difference in the used dimensions, some studies adopted the stages of the crisis management process to investigate its effectiveness, while other studies used the speed of decision-making, Communication, information flow, and resources re-allocation dimensions to express the effectiveness of crisis management, as for the managing by intelligence variable, three main intelligence types were used, the competitive, the strategic and the emotional intelligence.

compared to the prior studies, this study investigates the impact of managing by intelligences on the effective management of an occurring crisis, namely the "Corona pandemic" in one of the most affected industries "the hotels' industry", in addition, this study uses factors influencing effective crisis management gathered from a literature review rather than stages of crisis management in order to elucidate the most effected factors on the effectiveness of the corona crisis management in the hotels' industry.

1- Theoretical Framework:

1-1 Managing by intelligences

Based on the term "managing by intelligences" it is obvious that it combines management tasks and different types of intelligence, in other words, managing the organization and making decisions using different types of intelligence, this coincides with the definition of (مقراش، 2015, p. 02) who indicates that managing by intelligences refers to "the decision-making process using different types of intelligence", in the same context (صالح) (العزاوي & ابراهيم، 2010, p. 104) defined managing by intelligence as the ability to make appropriate decisions that will respond and adapt to the business environment in which an organization operates and achieve its goals depending on intellectual capacity characterized by acumen, speed understanding, effective use of information, and the ability to generate and

update knowledge; it is worth mentioning that the aforementioned authors emphasize the use of intelligences in information processing, and despite the fact that information is the cornerstone of the organization's activities, the latter is not limited only to that, as the management of individuals and the ability to answer to their needs is vital to ensure the achievement of the organization's goals that requires also intellectual capacities on how to deal with individuals and infer their needs.

Given the above, managing by intelligences is the ability to employ the organization's human intelligences and mental capacity in collecting, processing, and analyzing key information, used in the decision-making process and in managing both human and technical aspects of the organization in order to achieve its goals, hence managing by intelligences incorporate both intellectual capital management and knowledge management in its practices.

As for the intelligence types used in managing by intelligences, the two studies conducted so far to the researchers' knowledge that is the study of (مقراش, 2015) and (صالح, العزاوي, & ابراهيم, 2010) identified three types namely: strategic intelligence, competitive intelligence, and emotional intelligence.

1-1-1 Strategic intelligence

Strategic intelligence is considered a core capacity in modern organizations, based on (Alhamadi, 2020, p. 01) it represents a system and a tool that helps the decision-makers to monitor the environment and act proactively to enhance the organization's competitive position, furthermore (López-Robles, et al., 20-21 February 2020, p. 01) indicate that Strategic intelligence is about gathering, analyzing, interpreting, and deploying key information about both the internal and external business environment of an organization at the right time to decision-makers at all levels, in general, it can be said that strategic intelligence represents effective information processing related to the organization's business environment.

Maccoby in his book "strategic intelligence: conceptual tools for leading change" (2015) defined four dimensions of strategic intelligence that includes "Foresight", which represent the ability to anticipate change that can provide opportunities or represent threats to the organization, by examining the business environment and interpreting economic and social trends; "visioning", meaning having a clear insight about the business, "Motivation" which refers to the ability to inspire the employees to implement the vision and continually improve products and productivity; and finally "Partnership", that is the ability to develop productive relationships that serves the organization's goals.

1-1-2 Competitive intelligence

Competitors are a constant concern of all organizations, especially with the increasing intensity of competition, monitoring competitors and striving to outperform them is vital for the survival and prosperity of the organization and requires competitive intelligence that is defined as "the process of gathering, analyzing, and communicating information about competitors and their activities to assist in strategic decision-making" (Kumar, Saboo, Agarwal, & Kumar, 2020, p. 192), in the same context (Gračanin, Jovanović, & Kalac, 2015, pp. 27-28) added that competitive intelligence is the ability to convert primary information related to the organization's competitive environment into actionable information and knowledge through competitive intelligence tools that contribute significantly to strategic decision-making.

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Given the aforementioned definitions, competitive intelligence can be described as processing information related not only to competitors but to the whole competitive environment.

(Fattouche & Hedjazi , 2019, pp. 731-732) indicated that competitive intelligence is expressed by the four dimensions namely “Market intelligence” which is used to identify current and future trends of customers’ needs and preferences, new markets, and segmentation; “competitors' intelligence” which helps in monitoring the change in competitive intensity and evaluating the effectiveness of the competitive strategy in addition to gathering information about the actual and future activities of competitors; “technological intelligence” which represents activities that helps Investigate information related to the opportunities and threats that could be presented by the technology for the organization in a timely manner, and last “customer intelligence” which is defined as the processing and use of information regarding the company's current or potential customer.

1-1-3 Emotional intelligence

To establish the strategic vision of the organization and to respond to the competitors, human resources must be involved in the process and that require emotional intelligence, the concept of emotional intelligence in the field of business was first presented by “SALOVEY and MAYER” in 1990, which they defined as a branch of social intelligence that includes the ability to monitor the feeling and emotions of the individual for himself and others, and the use of information to guide personal thinking and behavior (مقراش, 2015, p. 43), thus it is a set of capabilities related to the emotional aspect of the individual, emotional intelligence is expressed by four dimensions: self-emotion appraisal, others’ emotion appraisal, regulation of emotion, and use of emotion (Kamassi, Manaf, & Azura, 2019, p. 325) which confirms the aforementioned definition.

1-2 Crisis management

Crisis management as defined by (Hořková-Mayerová, 2016-11-22, p. 850) is responding to a sudden and significant crisis by applying suitable strategies, in the same context, (Al Shobaki,, Amuna, & Abu Naser, 2016, p. 20) assert that “Crisis management is only practicing during a crisis”; the aforementioned authors consider crisis management as a reactive approach to an occurred negative event, However, some crises can be predicted and managed to be avoided through a crisis management plan before they occur, as (Kuzmanova, Contemporary problems related to crisis management of organizations, 2016, p. 256) indicated that crisis management is the ability to anticipate the crisis before it occurs and prepare proper precautions to overcome its negative impact on the organization and take the best advantage of it in a way that ensures the organization's future growth; on the contrast to the first approach, Kuzmanova refers to a proactive crisis management approach that consists of forecast and advance preparation of a plan that will respond to the crisis, while (Fleming & Zhu, 2017, p. 48) combined the two approaches and defined crisis management as "a systematic attempt to prevent organizational crises and to manage those that do occur", other researchers such as (Cao, Zhu, Han, & Zhu, 2018, p. 223) defined crisis management beyond the forecast and the response stage and argue that Crisis management is the ability to foreseeing potential crisis (pre-crisis), to respond to those that do occurs (in-crisis), and to recover from the crisis impacts (post-crisis), they added that crisis management requires

responding through important decision within a short time; the authors by that are emphasizing the importance of not only predicting and responding to the crisis but managing the aftermath and re-establishing the organization's balance.

Giving the above, crisis management represents the ability to deal with a crisis in all stages starting with predicting and preventing, responding, and last recovering from its impacts by adopting a set of managerial methods, decision, and strategies at the right time, researches has not only been interested in crisis management yet it to ensure it effectiveness.

1-2-1 Effective crisis management

Organizations must not only defines adequate crisis management plans and methods but ensure its effectiveness, by that, effective crisis management is ensuring that the end-results of crisis management practices in all its stages will be favorable and in the interest of the organization, to that end, many researchers attempted to defined factors influencing the effectiveness of crisis management as mentioned below:

- effective crisis management can be assured by predicting potential crisis and establish a plan that will prevent it or reduce the negative impact of it;
- crisis communication is the Cornerstone when it comes to effective crisis management and should therefore be clear, free from ambiguity;
- effective crisis management requires leaders who are able to understand the causes and effects of the crisis and provide solutions to it, manage change, and maintain a positive organizational climate;
- the quality of information and their availability on time is important to ensure effective crisis management, organizations must provide accurate, correct, and reliable information to all parties involved in the crisis management (Fleming & Zhu, 2017, p. 51.54.56);
- effective crisis management requires developed technologies due to the complexity of crisis risk analysis that requires a lot of data analysis (Fernando, 2020, p. 152);
- Crisis management teams which are usually "teams of experts" are vital for effective crisis management, as they ensure Team-working in gathering, considering, interpreting key information, and exchanging experiences to address the crisis (Leigh, 2016, p. 09);
- The effectiveness of crisis management relates to the process of mobilizing resources, including human expertise, and ensuring the effective use of them to deal with potential crises and confront them in all their stages, while preparing for situations that could appear unexpectedly;
- Effective crisis management requires a set of decisions to be made in a short and specific time that is insufficient to analyze and study the situation, and in circumstances characterized by uncertainty, the response should not be only rapid yet must be accurate so it won't exacerbate the severity of the crisis (مهراوي & سلمان, 2016, p. 191);
- Organizational flexibility can also contribute in the effectiveness of crisis management as it can ensure the ability to change in response to the crisis requirements.

1-3 Effective crisis management and managing by intelligence

A crisis causes mixed emotions and anxiety that affect the effectiveness of decision making and problem-solving which requires focus, and attention, systematic information processing,

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moreover, anxiety may influence decision-makers' motivations and their self-confidence in controlling the negative impact of the crisis (Mackinnon, Bacon, Cortellessa, & Cesta, 2013, p. 73;78), therefore, emotional intelligence is critical in crisis management as It enhances the effectiveness of crisis management by providing the ability to handle stress, understand one's own and others' emotion better (Suhaimi, Marzuki, & Che Su , 2014, p. 112) and address those emotions effectively, furthermore, emotionally intelligent leaders will be able to predict, identify, clarify, and manage the emotional responses to the occurring changes due to crisis such as the corona pandemic (Kantor, Apgar, Esmaili, Khan, Monash, & Sharpe, 2020, p. 568).

As for strategic intelligence, it contributes to anticipating threats and opportunities, as well as describing and managing risks facing the organization, and enabling the managers to define proper procedure, this type of intelligence makes the organization able to answer to future challenges and ensure the organizations' success (Yaseen, 2020, p. 78) in addition, Strategic forecasting enables crisis detection, assessment of changes that could affect the organization, such as regulatory framework, and more importantly, it enables all that in a timely manner (Kuzmanova, Contemporary problems related to crisis management of organizations, 2016, p. 259), likewise, competitive intelligence contribute in crisis management as the market intelligence and the customer intelligence enables the organizations to anticipate changes in consumer preferences and needs and new market opportunities and respond to them effectively, in addition, technological intelligence provides the ability to use technology properly in addressing the crisis faced by the organization and reduces the response time

2- EXPERIMENTAL:

Through this part, the results of the field study are presented and analyzed in order to answer the study questions.

2-1 Study tool

For the purposes of this study, the researchers used a survey that consisted of two parts based on prior studies and a review of the theoretical literature related to the study variables, the first part included the general social characteristics of the respondents, and the second part included two axes as Distributed below:

The first axis: managing by intelligences, that includes strategic intelligence, competitive intelligence, and emotional intelligence, this ax contains 22 sentences;

The second axis: about the effectiveness of crisis management and it includes 11 sentences;

The researchers also used the Likert three-point scale to evaluate the answers of the study sample, with the scale ranging from 1 to 3, meaning from disagree to agree.

2-2 Study Population and Sample

After developing the tool, a group of Constantine State hotels were selected, namely: Protea Hotel, El Rafia' Hotel, Al Hussein Hotel, and Marriott Hotel; the study population was estimated by 260 individuals that consist of administrators and heads of departments at the senior and middle management level, the study sample was calculated using the Stephen Thompson equation as follow:

$$n = \frac{N \times p(1 - p)}{\left[\left[N - 1 \times \left(\frac{d^2}{z^2} \right) \right] + p(1 - p) \right]} = \frac{260 \times 0.50(1 - 0.50)}{\left[\left[260 - 1 \times \left(\frac{0.05^2}{1.96^2} \right) \right] + 0.50(1 - 0.50) \right]} = 156$$

n: sample size

N: population size

Z: the standard score corresponding to the significance level 0.95 = 1.96

d: margin of Error = 0.05

p: proportion of population = 0.50

Thus the study sample was estimated at 156 individuals; after distributing the survey, 130 answers were retrieved and those that were not valid for the study were excluded, hence the responses subject to analysis were estimated at 124, with a response rate of 79%.

2-3 Analysis of the survey Reliability

To ensure the stability of the study tool, the Cronbach alpha test (α) was used, which represents one of inferential statistics that expresses the stability of the study tool and the importance of the results obtained reflected by the opinions of the majority, and the value of (α) ranges between 0 And 1 where reliability increases as the number of questions increases; the table below demonstrate the results of the Cronbach alpha test:

Table (1): Survey's Reliability

axis	N° of sentences	Alpha cronbach
Managing by intelligence	22	0.772
Effective crisis management	11	0.617
The survey	33	0.822

Source: Results of the questionnaire using SPSS.V23

The previous table shows that the alpha coefficient of the study variables and the overall survey is more than 0.6, this indicates that the survey has a high degree of stability, which increases its reliability as a tool for data collection and the results' reliability.

2-4 Characteristics of the study sample

The social characteristics of the study sample consist of three factors: gender; age; educational qualification; experience; and job position as presented in the table below:

Table (2): Characteristics of the study sample

Variable		frequency	%
Gender	Male	88	%71
	female	36	%29
Age group	From 20-30	31	%25
	From 31-40	40	%32
	From41-50	36	%29
	More than 50	17	%14
Educational qualification	License	52	%42
	Master / magister	36	%29
	Senior technician	4	%3
	State Engineer	32	%26
N° of working years	Less than 5 years	27	%22
	From 5-10 years	40	%32
	More than 10 years	57	%46

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job position	Director	4	%3
	Assistant Director	4	%3
	Head of department	32	%26
	Administrators	84	%68

Source: Results of the questionnaire using SPSS.V23

According to the table, most of the researched sample were males (71%) compared to the females (29%) which indicates that the hotels focuses more on employing males than females and/ or the reluctant of females to work in hotels due to the nature of work that requires availability at all times and night shifts which may not suit women because of their family responsibilities; the results also showed that most of the respondents are aged between 31-40 years old (32%), titled with a License degree (42%) and a working experience between 5 to10 years (32%) which indicates job stability and a decreased work turnover, in addition, most of the study sample occupies either leadership positions or positions that allow them to participate in the decision-making process indirectly as the study sample consist of administrators and heads of departments at the senior and middle management level, which suites the requirements of the study and increases its credibility.

2-5 Results related to the answer to the first sub-question

The first sub-question states: "To what extent is the managing by intelligences dimensions available in the hotels under-study?" To answer this question, the arithmetic means and standard deviations were extracted, and the results are shown in the following table:

Table (3): 3 Means and Standard Deviations of managing by intelligences

dimensions	Mean	Standard Deviation	Rank	Importance
Strategic intelligence	2,848	0,227	2	High
Competitive intelligence	2,892	0,249	1	High
Emotional intelligence	2,774	0,253	3	High
Managing by intelligences	2,818	0,183	/	High

Source: Results of the questionnaire using SPSS.V23

The table 03 shows that the availability of the managing by intelligences dimensions in the Hotels under-study is high with a arithmetic mean of 2.818 and a standard deviation of 0.183 which indicates that there is low significant difference in the answers between the sample members, the highest rank was for competitive intelligence with a mean of 2.892 and standard deviation estimated by 0.249, while strategic intelligence takes the second rank with a mean of 2.848 and standard deviation of 0.227, whereas the emotional intelligence gets the lowest rank with a mean of 2.774 and standard deviation estimated by 0.253, furthermore, regarding the strategic intelligence dimension, the sentences stated “The hotel’s employees have a clear vision of their career path”, “The hotel know what motivates the employees” and “Mistakes are considered as an opportunity to learn and are not punished for to encourage engagement” ranked the 1st, the 2nd and the 3rd respectively, this could reflect on the employees’ engagement with the hotel and increases their productivity, on the other hand, the sentence that stated “The hotel can anticipate changes in the business environment that may present opportunities or threats” had the lowest rank, this can be explained by the fact that the hotels’ industry is not characterized by constant change and does not require an excessive monitoring

of the business environment, as for the emotional intelligence, the results shows that the hotels under study are characterized by good informal relationships between the employees that could provide a positive working environment and prevent organizational conflicts, the results also show a high self-emotion awareness of the study sample as the related sentence ranked the 1st however the sentence that stated “I have the ability to understand other people's emotions” ranked the last, this could be considered a shortcoming in such industry that is based primarily on interactions with clients, in addition, the sentence that stated “The hotel has the ability to predict the future customers’ needs” related to the competitive intelligence dimension, ranked the last this could affect the competitiveness of the hotels as predicting future needs could lead to a competitive advantage.

Accordingly, and in response to the first sub-question, the respondents agreed that the managing by intelligences dimensions are highly available in the hotels under study, as the dimensions’ mean came in the "agree" range according to the triple Likert scale with a low dispersion.

2-6 Results regarding the answer to the second sub-question

The second sub-question states: "How effective is the crisis management at the hotels understudy?" To answer this question, the arithmetic means and standard deviations were extracted, and the results are shown in the following table:

Table (4): Means and Standard Deviation of effective crisis management

Statement	Mean	Standard Deviation	Importance
the corona crisis management effectiveness	2,841	0,191	High

Source: Results of the survey using SPSS.V23

According to the table, the hotels under-study have a high effective crisis management as the arithmetic mean was estimated by 2.818 and the standard deviation by 0.183 indicating a low dispersion between the answers of the sample members; furthermore, both sentence that stated “The hotel has the ability to communicate effectively during crises” and “The hotel is characterized by organizational flexibility that helps in overcoming crises” has the highest rank with a mean of 2.967 and a standard deviation of 0.177 which indicates that effective communications and organizational flexibility are vital in surviving the corona pandemic crisis in the hotels under study as organizational flexibility will ensure the proper respond to the changes due to this exceptional situation, while communications will ensure an effective work flow, in addition, resources ammunition and the ability to re-allocate the hotels’ human, material and financial resources to respond to crises as well as ensuring information flow shows the second and the third high level of importance in dealing with the pandemic among the hotel under study, the results also indicates that the hotels under have a pre-defined procedures and a cross-functional teams to respond to crises as they occur which indicates that the hotels under study adopts a proactive approach in responding to crisis, whereas the less ranked factors influencing the effectiveness of crisis management were leadership flexibility and responding to the crisis in a timely manner Which can be explained by possible organizational conflicts that affects responding to the crisis in the right time.

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Accordingly, and in response to the second sub-question, Respondents agreed that the effectiveness of crisis management in the hotels under study was high, as the average variable was registered in the "agree" range according to the triple Likert scale with low dispersion.

2-7 Hypothesis testing

The hypotheses of the study have been tested at a significance level $\leq 5\%$ and at a probability of 95% confidence using leaner regression as shown below.

2-7-1 Second level Subtitle

The leaner regression has been used to test the main hypothesis and investigate the significant impact of managing by intelligences on effective crisis management as shown below.

Table (5): Main hypothesis test results

Statement	R correlation coefficient	R2 determination coefficient	β	Statement
Effect of managing by intelligences on the corona crisis management effectiveness	0.632	0.399	0.632	0.000

Source: Results of the survey using SPSS.V23

Based on the results shown in the above table, it is evident that there is a strong correlation and influence between strategic intelligence and strategic diagnosis of the two institutions under study, where:

The value of the correlation coefficient R 0.632 between the independent variable and the dependent variable, at the significance level 0.000, indicating a strong and positive correlation between managing by intelligence and effective crisis management of the study sample.

The coefficient of determination R2 0.399, and this result is explained by the fact that the independent variable can explain 39.9% of the variance in the dependent variable, meaning that 39.9% of the changes in the effectiveness of crisis management are due to changes in the level of availability of managing by intelligences dimensions.

The regression coefficient β reached a value of 0.632, which means that the change in the managing by intelligences of the hotels under study leads to a change in the effectiveness of crisis management by 0.632, which reflects an influence relationship between the two variables.

Given the above, and since the level of significance is less than 0.05, we accept the main hypothesis which stated: “managing by intelligences has a significant impact on the effectiveness of the corona crisis management in the hotels under study at a significance level of 0.05” as the results of all tests assert that managing by intelligences has a positive effect on the effectiveness of the corona crisis management according to the respondents, the degree of correlation between the two variables exceeded 50%, and the degree of influence of the independent variable on the dependent was estimated at 63.2%, which indicates the importance of adopting managing by intelligences to ensure effective crisis management

2-7-2 sub- hypotheses testing

In order to enhance the aforementioned results and to determine which of the managing by intelligences dimensions highly affect the effectiveness of crisis management the sub-hypotheses has been tested as follow.

Table (6): sub-hypotheses test results

Statement	R correlation coefficient	R2 determination coefficient	β regression coefficient	Sig Significance	Statement
Effect of strategic intelligence on the corona crisis management effectiveness	0.394	0.156	0.394	0.000	03
Effect of competitive intelligence on the corona crisis management effectiveness	0.703	0.495	0.703	0.000	01
Effect of emotional intelligence on the corona crisis management effectiveness	0.426	0.181	0.426	0.000	02

Source: Results of the survey using SPSS.V23

The table 06 shows the following results:

The value of the significance level for the dimensions of managing by intelligences was estimated by 0.000, which indicates a correlation between the dimensions and the effectiveness of crisis management

The value of the correlation coefficient R between the competitive intelligence dimension and the effectiveness of crisis management was 0.703, which indicates a moderate and positive correlation relationship, while the value of the correlation coefficient R between the emotional intelligence dimension, strategic intelligence and the effectiveness of crisis management was 0.426 and 0.394 respectively indicating a weak and positive correlation

The results also indicate that the correlation between the dimension of competitive intelligence and the effectiveness of crisis management is the strongest, and this can be explained by the focus of hotels on searching for the best ways to attract customers during the Corona crisis, followed by the emotional intelligence dimension, which is vital to manage the impact of changes resulting from the Corona crisis on employees, in addition, emotional intelligence is considered an important feature in the hotel sector which mainly depends on interactions with clients;

The determination coefficient R2 reached different values from one dimension to another, and the most dimension that explains changes in the effectiveness of the corona crisis management is the competitive intelligence, as 49.5% of the changes in the effectiveness of the corona crisis management are due to changes in the level of competitive intelligence of the study sample.

The value of the regression coefficient of the competitive intelligence dimension was 0.703, which means that the degree of influence of competitive intelligence on the effectiveness of the corona crisis management was estimated by 70.3%, which indicates the importance of the competitive intelligence in hotels to ensure the effectiveness of managing the Corona crisis

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and reduce the losses of the hotels under study.

These results indicate that there is a correlation and influence relationship between the effectiveness of crisis management and the dimensions of management with intelligence. Accordingly, we accept the three sub-hypotheses, and we indicate that the competitive intelligence dimension has a greater impact on the effectiveness of crisis management, while the least impact is the strategic intelligence dimension at a significance level of 0.05.

2-8 Results regarding the answer to the fourth sub-question

The Fourth sub-question states: “Are there statistically significant differences for the study variables among the sample members due to: gender, age, academic qualification, experience, and job position variables at a significant level of 0.05?” this sub-question was answered using the one way ANOVA test that indicates differences when the significant level is less than or equal to 0.05.

2-8-1 Studying the differences for managing by intelligences due to the demographic and functional variables:

The hypothesis that stated “There are statistically significant differences between the averages of managing by intelligences of the study sample individuals due to: gender, age, academic qualification, experience, and job position variables at a significance level of 0.05” has been tested as follow.

Table (7): The ANOVA analysis for differences in managing by intelligences due to the demographic and functional variables

managing by intelligences	F	Sig
gender	1.893	0.171
age	37.078	0.000
academic qualification	22.043	0.000
Experience	62.128	0.000
job position	52.021	0.000

Source: Results of the survey using SPSS.V23

Given the above table, it is evident that there are statistically significant differences at a significant level of 0.05 in the managing by intelligences variable among the study sample due to age, experience, educational level and job position variables, This can be explained by the fact that intelligence is gained with the age and with the increasing years of job experience, as it will increase the individuals' ability to observe and analyse the variables in their environment and using those information in the most suitable context, moreover, the educational level contributes to the individuals' intelligence through the knowledge that they received during their academic path, which is considered a reliable basis for their job tasks and their interactions with others and is reflected on their intelligence, in addition, job positions characterized by the ability to make decisions improves the individuals' intelligence, the results also indicate no statistically significant differences in terms of the gender variable which is a logical result, as gender has nothing to do with the individuals' intelligence level.

2-8-2 studying the differences for effective crisis management due to the demographic and functional variables

The hypothesis that stated “There are statistically significant differences between the averages of effective crisis management among the study sample individuals due to: gender, age, educational qualification, experience, and job position variables at a significant level of 0.05”, has been tested as follow.

Table (8): The ANOVA analysis for differences in effective crisis management due to the demographic and functional variables

The corona crisis management effectiveness	F	Sig
gender	6.604	0.011
age	11.908	0.000
academic qualification	47.731	0.000
Experience	15.749	0.000
job position	14.366	0.000

Source: Results of the survey using SPSS.V23

Similarly to the table before, this table indicates a statistically significant difference in the effective crisis management variable among the study sample due to age, experience, educational level, and job position variables, This can be explained by the fact that the ability to deal with changes and occasional situations due to crisis increases with the age and with the increasing years of job experience, moreover, the knowledge gained from the educational level may be used in finding the proper way to deal with a crisis, in addition, job positions especially leading position, will contribute in surviving the crisis due to the leaders' good knowledge of the hotel and its resources, the results also indicate no statistically significant differences in terms of the gender variable which is a logical result, as dealing with a crisis depends heavily on knowledge acquired from either academic qualification; job experience or job position and does not depend on gender; a male or female without the right knowledge and experience won't make a difference in dealing with a crisis.

Conclusion:

The study address a current topic and investigated the impact of managing by intelligences on the effectiveness of the corona pandemic crisis management in one of the most affected industries, the hospitality industry specifically the hotels, the research has found that the effectiveness of the corona crisis management is affected by the availability of the managing by intelligences dimensions in the hotels under study, and that the competitive intelligence is the most influential dimension, moreover, both the effectiveness of corona crisis management and the availability of the managing by intelligences dimensions are high in the hotels under study, especially competitive intelligence due to the increased intensity of competition between hotels to attract customers during the Corona pandemic and ensure their survival. The research also shown that effective communications and organizational flexibility are the most features contributing in ensuring an effective corona crisis management and that the hotels under study adopt a proactive approach, in addition, the results indicates a statistically significant differences between the averages of managing by intelligences and the effectiveness of the corona pandemic crisis management due to age, academic qualification,

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experience, and job position variables at a significance level of 0.05 unlike the gender variable.

Based on the study results, the researchers recommend the hotels under study to pay more attention to their leadership system and try to make it more flexible in order to deal properly with employees during a crisis, and focus on reducing the crisis response time, in addition, the hotels under study should focus on increasing their employees' emotional intelligence especially regarding relationships with others, and should not only focus on current customer needs, yet on predicting future customers' needs as it could lead to a competitive advantage, finally, the hotels' industry should consider seriously adopting the managing by intelligences concept in responding to the crisis.

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