

## **Factors Influencing Crisis Preparedness of the Tourism and Hospitality Industry in Egypt: Employees' Perception**

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### **Abstract**

Increasingly, crises are an unavoidable aspect of business life, and hotels and travel agencies, as part of the vast tourism and hospitality industry, are especially vulnerable to crises that may destroy their favorable images. Therefore, this study aims to investigate factors influencing crisis preparedness in the tourism and hospitality industry. Four important factors; namely, employees' skills and experience, the role of management, business size and capabilities, and government support were chosen as the main factors that may influence crisis preparedness of the tourism and hospitality industry in Egypt. Data were collected from 30 five-star hotels and 20 travel agents located in the Greater Cairo region in Egypt. A total of 450 forms were collected; 315 and 135 questionnaires were collected from hotels and travel agencies, respectively. Only 370 surveys, 260 from hotels and 110 from travel agencies, were valid for the final data analysis. The results of the SmartPLS-SEM revealed that the investigated four factors, and crisis preparedness measures, all had a significant positive correlation. Also, the results have revealed that employees' skills and experience have the strongest positive influence on the organization's crisis preparedness. Finally, the study validates a new measurement to measure these factors along with theoretical and practical implications.

**Keywords:** Hospitality, travel agencies, crisis management, crisis preparedness, employees' skills and experience, government, organization size and capabilities.

### **Introduction**

The tourism and hospitality industry has become critical in driving economic development in many countries. Unplanned development can lead to unpleasant impacts both on society as a whole and the tourism market in particular (Elshaer & Marzouk, 2019). The development of the tourism and hospitality industry depends on engaging in strategic planning as a means of gaining a competitive advantage in the face of the dynamic and complex world, where increasing uncertainties and risks (Lawton & Weaver, 2009). According

to Albattat and Mat Som (2019), the tourism and hospitality industry is generally considered one of the most sensitive sectors to crises. Therefore, a core component of tourism strategic planning is adhering to an effective crisis preparedness strategy, which entails the identification and assessment of organizational resources and capabilities, as well as other opportunities in terms of stakeholders and shareholders' roles (Pearson, 2002). In this regard, Quek (2019) argued that the effectiveness of crisis preparedness in tourism and hospitality organizations largely depends on stakeholders' willingness to change long-standing policies and be ready for unforeseen disasters.

In this vein, Rittichainuwat (2013) argued that crisis preparedness became a significant component of contemporary industry and management's awareness and preparedness for a potential crisis play a key role in crisis prevention and effective management before, during, and after a crisis. Particularly, at the beginning of the twenty-first century, the number of tourism and hospitality-related crises increased. According to Hall (2010), there were 37 hospitality and tourism crises between 1977 to 2010, 34 of them occurring since 2000. As a result, managers' understanding of crisis management has become highly significant. According to Elshaer and Marzouk (2019), effective crisis preparedness helps tourist businesses management to convey important facts to stakeholders to retain public trust and minimize potential harm to the hotel's reputation. Furthermore, managers' awareness of potential causes of the crisis, prior experience and effectiveness in resolving previous crises, innovation of crisis strategies, and crisis handbooks for crisis team members have all become essential (Filimonau, 2020).

Despite the negative effects of different crises on tourism and hospitality organizations and the importance of this issue, managers in tourism and hospitality industry have shown less attention to crisis planning and preparation (Wang & Wu, 2018). According to Albattat and Mat Som (2019), the orientation of organizations and their operational actions in crisis preparedness are influenced by differences in the way management views crises, and there is an obvious need for a clear explanation of how organizations be prepared for crises. It is argued that companies are hesitant to devote financial assets support to crisis preparation and planning activities (Ghaderi et al., 2014; Wang & Wu, 2018). Various explanations were suggested for this hesitation; some investigators argued that disasters could not be forecast and investing funds and resources for actions that may not occur is inappropriate in terms of financial planning (Ghaderi *et al.*, 2012). Denial and the sense of invulnerability are two further causes (Alcott, 2006), cultural differences between managers (Wang & Wu, 2018), individual and personal objectives (Hilliard, 2011), new socio-behavioral norms (Elshaer, 2021) and organizational culture (Ritchie, 2019) are other reasons. Additionally, there is a vast extensive literature that explains

how employees make decisions in crises and the different reasons for disaster reduction failure (Karl & Schmude, 2017), however, there is still a scarcity of research into identifying the factors that serve as the foundation for risk preparedness (Winsen et al., 2011; Yang *et al.*, 2015). Hence, most of the recent research on crisis management focuses on recovery and response rather than preparedness (Becken & Hughey, 2013). The present study, on the other hand, focuses on crisis preparedness; it investigates the factors influencing crisis preparedness of the tourism and hospitality industry from the perspective of its employees. A model was proposed to describe the critical factors that influence crisis preparedness management in the tourism and hotel industry. Hence, this study's contribution is critical in determining the most successful capabilities, techniques, and relations that management must pay attention when crisis planning to crisis preparedness.

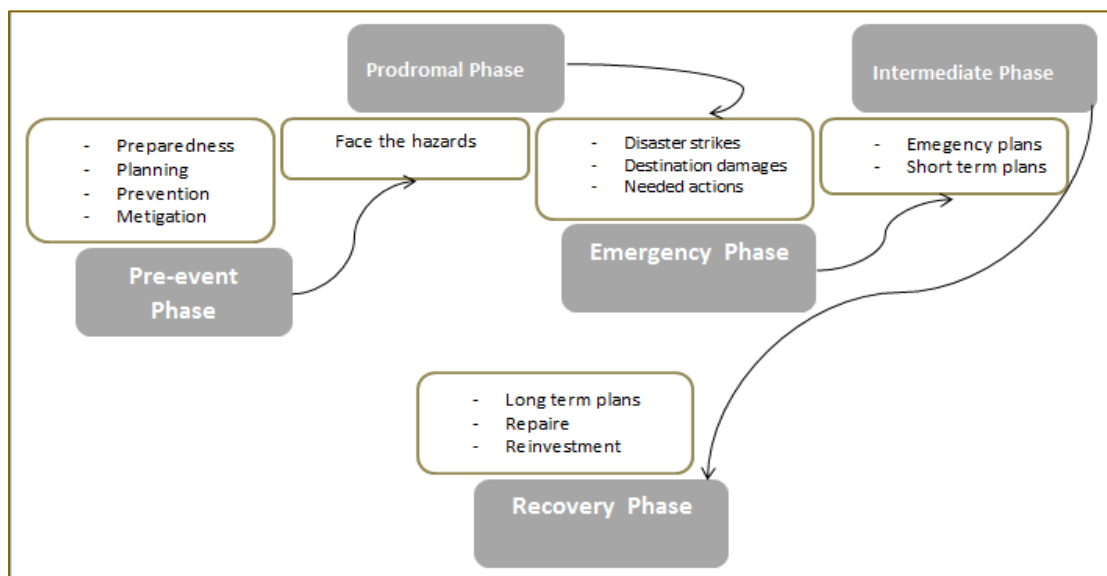
## **Literature Review and Theoretical Model**

### **Importance of Crisis Preparedness**

Managers in the tourism and hospitality industry need to become more and more concerned with crisis preparedness tactics and plans to improve business resilience (Elshaer *et al.*, 2019). The forms and natures of possible organizational crises are countless, and bounded rationality prohibits organizations and individuals from developing specific contingency plans for every conceivable crisis (Yang & Nair, 2014). The importance of preparing for crises is accordingly, apparent due to the suggestion that the trend of nearly simultaneous crises over the last 20 years is not a coincidence and is a trend that can be expected to be continued (Ali & Al-Aali, 2016). Thus, the practice of crisis preparedness is sorely needed. Crisis preparedness can be defined broadly here as the readiness to cope with the uncertainty and change engendered by a crisis. When we say that an organization has developed a crisis preparedness strategy, it means the organization has at least done everything possible to prevent the major crises from occurring in the first place and to better manage those that may occur (Williams & Baláž, 2015). It is fully ready to effectively handle a crisis at different phases or stages. Crisis preparedness is the essence of proactive crisis management (Xie *et al.*, 2019).

The crisis preparedness sub-stage of the disaster life cycle may be found in the stage of pre-crisis. The preparedness sub-stage seems to be about the activities and processes that organizations must do to avoid or minimize the impacts of a crisis (Jin, 2010). As a result, the importance of readiness can be highlighted because it happens at the beginning of the crisis lifecycle when managers should start planning for the next likely approaching disaster (Lauge, 2009). In other words, when confronted with a crisis, organizations that had a plan in place may experience a shorter crisis length and fewer after-effects than those without planning (Wong, 2020). As a result of crisis preparedness, an

organization's continuous operations are protected, and lives are saved (Elshaer & Marzouk, 2019). Planning, reaction, recovery, and mitigation are the components of crisis preparedness (Albattat & Mat Som, 2019). Pre-event phase, prodromal phase, emergency phase, intermediate phase, and recovery phase are the components of crisis preparedness (Faulkner, 2001) (Figure 1). Pre-event phase, when crises are being planned for and their impacts are being attempted to be avoided and mitigated; the prodromal phase when it becomes clear that a crisis is on the horizon requires the activation of managerial strategies in which managers have no alternative and must confront the threats; emergency phase, when a crisis hits and begins causing damage to the destination and the effects of the crisis are felt, action is required to save property and people; intermediate phase, a point at which emergency procedures must be implemented to help individuals and meet their requirements; recovery phase, where long-term strategies should be implemented and damaged destinations reconstructed (Faulkner, 2001; Ritchie, 2004). The current study focuses primarily on the pre-event stage, where action can be taken to prevent crises. Developing emergency procedures beforehand allows for more successful emergency management (Manfreda *et al.*, 2008).



**Figure (1): Crisis preparedness framework**  
**Source: (Faulkner, 2001)**

Gaining such crucial knowledge is essential from a theoretical aspect to completely appreciate how tourism and hospitality managers can prepare and plan for various crises, the dynamics of crisis preparedness activities as well as the resilience factors (Biggs *et al.*, 2012; Hall *et al.*, 2020).

## Tourism and Hospitality Industry and Crises

In recent decades, the tourism and hospitality industry has faced crises of varying levels of severity (Ritchie, 2019). The financial crisis of 2008, the SARS epidemic in 2003, the World Trade Center terrorist attacks in the United States, and the Coronavirus pandemic. Due to their effects on consumer behavior and trust, disaster events have already had global ramifications for the tourism and hospitality system and can be quite destructive to tourist businesses (Wong, 2020). The probability of a crisis occurring and intensifying in the industry is surprisingly increasing (Paraskevas *et al.*, 2012), possibly larger than many other businesses as the degree to which consumers' purchasing decisions are based on perceptions of security and safety (Quek, 2019). Crises in organizations may be caused by a variety of factors, especially in developing nations (Burns *et al.*, 2019). According to Elshaer and Marzouk (2019), crises and risks scenarios that may occur in the tourism and hospitality sector can be attributed to two primary factors:

- 1) Problematic aspects of tourism and hospitality services and characteristics of operations in general, and
- 2) Exogenous occurrences, which might occur because of natural disasters or because of wider economic, social, and political processes.

Therefore, crises come in many forms, and if they are not handled effectively, they can have disastrous consequences for the industry (Elshaer & Marzouk, 2019), particularly in the tourism and hospitality industry, which employs and accommodate people from various countries and cultures (Ghaderi *et al.*, 2014). As a result, the tourism and hospitality industry is regarded as a risky business (**Table 1**). The hotel sector, for example, is much vulnerable to risks due to accommodating tourists from all over the world as well as its operational activities that may create a conflict of interest among the stakeholders (Elshaer & Marzouk, 2019). On the other hand, financial risks and market risk represents the major risks that threaten travel agencies, according to El-Sisi *et al.* (2020). According to Mohamed & Abd El Wrath (2012), the major financial risks that face Egyptian travel agencies are currency risk, high-interest rates, limited guarantees for funds, taxes, and low demand. While, market risk is related to the fluctuations of market prices and the loss of the liquid portfolio (Ekinci, 2016).

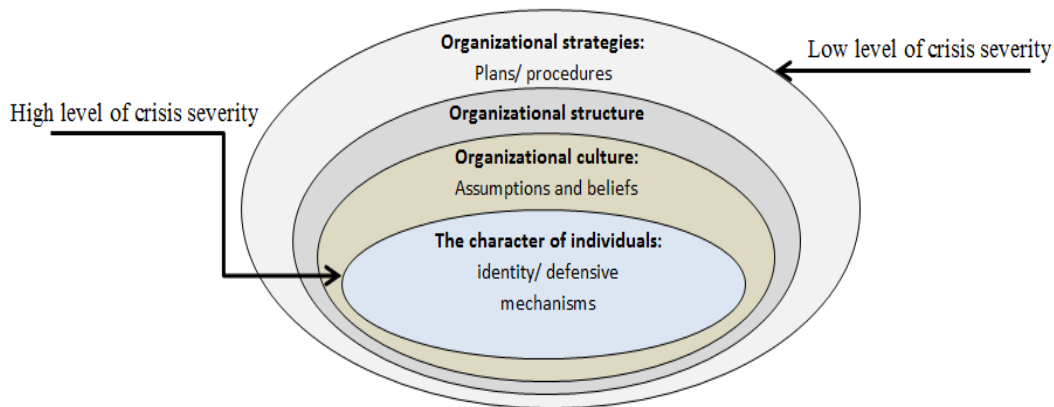
**Table 1:** The tourism and hospitality industryrelated risks

Hotel sector	Travel agencies
Operational risks	Foreign currency risk
Perishability of products	Interest rate risk
Failure of service	Cost of transportation
Cross-contamination	Aging tourist markets
Problems with suppliers	Airport safety and security
Increased competition, nationally and internationally	

Carrying capacity
Number of temporary personnel
Theft/fraud in business by staff
Workload and crazy working shifts
Stress
Workplace violence
Too high prices in the tourism industry
Lack of proper financial systems
Decrease in disposable income
Prices of competitors
Technological changes
Loss of data
Customer complaints
Fire
Crime in general
Political instability in neighboring countries
Natural disasters
Epidemics

Source: El-Sisi *et al.*, 2020; Shahnaznayebzadeh & Harandi, 2014

According to **Table 1**, the typology of risks that threaten the tourism and hospitality industry's businesses are interrelated and include major risks and emergencies in general and not necessarily for the industry's work environment. The likelihood of crises and their consequences implies that preparedness is critical for business existence in general, and organizations in the tourism and hospitality industry in particular (Wang & Wu, 2018). Therefore, in the tourism and hospitality industry, it is possible to eliminate or minimize any potential risks or unpleasant effects (Shiyan, 2004). The best way to deal with a crisis in a tourist business is the preparation to prevent the crisis from happening in the first place (Bernstein, 2012). According to several experts, crises and disasters may be mitigated if companies engage in proper scanning, preparation, reacting and non-fault learning (Okumus & Karamustafa, 2005; Tidwell, 2016). Therefore, organizations in tourism and hospitality can avoid or mitigate undesirable consequences by proactively and appropriately equipping themselves (Shiyan, 2004). There is enough data to suggest that identifying early warning signs might help company management limit the damage (Ghaderi *et al.*, 2012). In this essence, Mitroff (1992) developed four crucial layers based on which an organization can be evaluated as crisis-prepared or crisis-prone that include organizational strategies, organizational structure, organizational culture, and individuals' character which are commonly portrayed as an onion model as shown in figure 2. According to Wang and Ritchie (2013), crisis preparedness requires examining the four key organizational levels.



**Figure (2):** Layers of organization preparedness

**Source:** (Kovoor-Misra *et al.*, 2000; Mitroff, 1992)

The core layers are the organization's basic assumptions, norms, and values, which are considered as the primary source of defense mechanisms. However, these innermost layers are sometimes indistinguishable and frequently disregarded, even though they are critical to improving crisis preparedness plans. Actually, business management must establish an acceptable and proactive organizational culture to be prepared for a crisis (Elsabbagh *et al.*, 2004). On the other hand, contingency policies, procedures, and official acts make up the most visible layer, which protects the core layers. As a result, it is recommended that tourism and hospitality businesses develop crisis preparedness plans for diverse circumstances (Ghaderi *et al.*, 2012). There is an iterative link between layers, but the core layer determines the surrounding layers and how well companies prepare for crises (Wang & Ritchie, 2013).

## **Determinants of Crisis Preparedness**

### **Employees' skills and experience**

The existing crisis literature shows that after a crisis, organizations are more likely to be ready for future crises (Han & Nigg, 2011). The degree of preparedness in terms of decision-making capabilities is a key determinant of the level of stress caused by surprise, as well as an organization's ability to deal with the crisis (Promsri, 2014). According to Albattat and Mat Som (2019), tourist organizations that had suffered lifeline losses in previous crises were more prepared for future crises than those which have not. Organizations that have previously faced a crisis are more interested in enhancing employees' skills and knowledge (Elshaer, 2021) as well as improving their evacuation plan because they have experienced and learned from the effects of previous risks on the individuals and properties. Some research also assumes that leaders who are confronted with a crisis event

without plans, or prior experience perform badly due to the situation's lack of experience and the unpredictable nature of the crisis procedure (Pearson, 2002). It is reasonable to assume that businesses that have faced prior crises have skilled and experienced employees who learned from their mistakes and are thus able to prevent repeating them in the future by identifying situations that are similar to those that led to previous errors and making corrective action (Elshaer *et al.*, 2019).

### **Role of Management**

Management must set the standard for their team during the crisis and all involved parties must strive to achieve the highest performance levels, managers employ sophisticated talents such as organizational, communication, problem-solving, analytic, and social ability to influence others' actions (Slepski *et al.*, 2019). When a crisis strikes, the team will look for their managers for leadership and direction throughout the event and its aftermath (Reynolds & Knox, 2019). Various types of business management, according to previous theoretical studies, may have a certain influence on their managerial decisions, and they have also consistently demonstrated a positive link between anticipated uncertainties and proactive managerial strategies (Tan, 2002). Researchers have established management type whether an organization is independent or chains as a predictor of crisis preparedness (Sadiq, 2010). Chain businesses with their varied and wealth experiences, professional teams, talents, and other required resources may be more capable of dealing with unknowns, risks than independent organizations (Albattat & Mat Som, 2019). These results are understandable because chains may have more professional management and might be required to implement rigid preparedness measures by their corporate headquarters (Dahlhamer & D'Souza, 1997). Wong (2020) argued that managers of chain organizations have a responsibility not only for coping internally with the technical and organizational problems of crisis but also with international and intercultural consequences.

### **Government Support**

Crises preparedness necessitates a multidisciplinary strategy involving collaborations between government agencies, the private sector, and social organizations (Haigh & Amaratunga, 2010). The government has been recognized as a major stakeholder in the crisis preparedness process since they are responsible for essential development functions that increase resilience and help to decrease crises (Elshaer, 2021; Malalgoda *et al.*, 2016). A study by Manyena (2006) found a strong correlation between crisis preparedness in communities and the competence of local governments to plan ahead and execute early warning systems, as well as effectively create and implement



development strategies. Therefore, governments must improve their organizational capacity to successfully engage in crisis reduction activities to minimize or mitigate the negative effects of crises (Collins & Kapucu, 2008). In addition, the concerned government official websites must proficiently deliver value for their stakeholders (e.g., tourist and hospitality enterprises) (Marzouk, 2021) in terms of knowledge and guidance about potential crises and how to be collaboratively managed (Elshaer, 2021). Companies can participate efficiently and orderly in crisis preparedness management if the government takes on the practical duty with support and guidance (Kong & Sun, 2021). However, according to Malalgoda et al. (2016), many nations have government institutions with central decisions and resources that focus on increasing reaction rather than proactive mitigation of crises. From this point of view, the government's role should be altered to proactive actions rather than reaction and should include at least the economic, legal, social, and political aspects, as follows (Kong & Sun, 2021):

Opening the official channels of communication and offering companies support in terms of data and information disclosure, the creation and development of applicable legislation, the rigorous enforcement of laws, the investigation of breaches, and legal control, and creating appropriate economic and financial measures.

### **Organization size and capabilities**

One of the most reliable and consistent indicators of crisis preparedness is an organization's size and business capabilities (Dahlhamer & D'Souza, 1997). It has been suggested that growth is linked to expanding market shares, product variety, and earnings, all of which affect control loss and systemic rigidity, which limit the information and communication distribution ability (Elshaer & Marzouk, 2019). However, a large hotel, for example, may experience accumulated control loss along its development path (Reilly, 1987). Weible (2010) studied crisis preparedness and mitigation among business organizations employees and found a significant positive relationship between organization size and employees' preparedness, where large organizations may be able to adapt to changes and uncertainties in their environment with good strategy development and organizational preparations better than small organizations. Caponigro (2000) suggested that depending on the financial position and size of large organizations, they are more likely to provide an evacuation plan than small organizations. Furthermore, Caponigro stated that because small businesses have fewer resources, crisis preparation is less essential as they believe that the disaster will have no impact on them and they will manage their organizations without a strategy. However, Pennington (2018) claimed that smaller organizations may be more effective because the communication chain is shorter, and the crisis preparedness team can

communicate threats across the organization more quickly but employees in large organizations may have the impression that no one is responsible for a problem because it will be handled by someone else.

### **Conceptual framework and hypotheses development**

Although previous research has provided conflicting results as to whether prior crisis experiences and skills of employees have a negative or positive effect on its present level of crisis preparedness (Elshaer, 2021), some studies argued that organizations that have skilled and experienced employees could demonstrate a higher level of preparedness for future disasters (Henderson, 2007; Pennington-Gray, 2018; Reilly, 1987). After a crisis, employees' organizations must have gained knowledge about how to respond to future crises, thus enhancing their level of preparedness for future crises (Biggs *et al.*, 2012). Previous research has found that employees' crisis experience improves an organization's opportunities to contribute to preventative measures as well as respond to warnings (Sorensen, 2000; Wang & Wu, 2018). As a result, it is reasonable to assume that employees' skills and experience will aid an organization in better understanding the necessity and importance of making adequate crisis preparation. Accordingly, the following hypothesis is formulated:

*H1: Employees' skills and experience positively influence crisis preparedness*

In recent years, chain hotel and travel agents management has had to deal with a significant increase in the number of threats directed at their operations. In comparison to other industries, managers of tourism and hospitality organizations bear a unique burden in that a crisis can have a greater impact on their stakeholders' relationships due to the industry's high vulnerability to various risks and uncertainties (Elshaer & Marzouk, 2019). According to Wang and Wu (2018), managers are those who can influence others' actions by using advanced talents and it is important to understand what motivates management to be crisis prepared and plan for crisis preparedness. Managers in the tourism and hospitality industry must serve as role models for their employees' safety actions and provide them with crisis preparedness knowledge, procedures, and guidance in a way that enhances safety culture in the work environment (Elshaer, 2021). Furthermore, he added that the role of managers in times of crisis is to guide and encourage employees to complete their tasks efficiently and promptly. Accordingly, the following hypothesis is suggested:

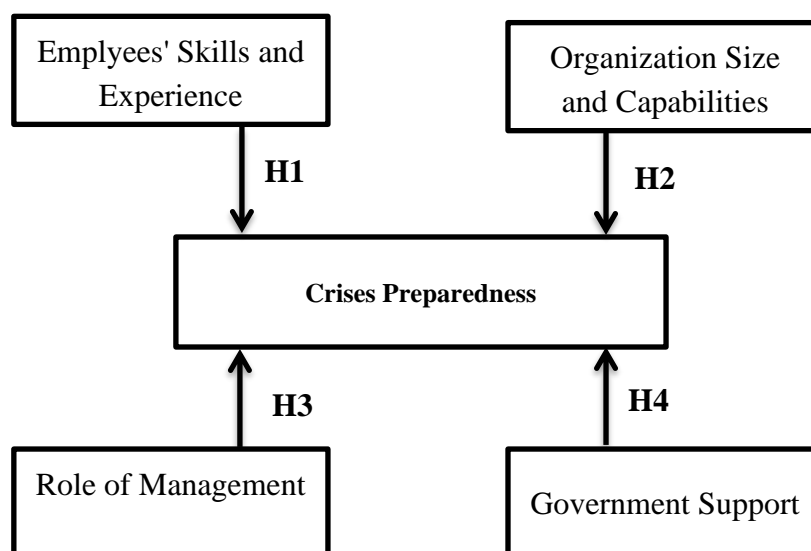
*H2: The role of management positively influences crisis preparedness*

When managers evaluate their power and feasibility for crisis preparedness, the government's unique support becomes a critical factor. Without the guidance and support of the government, management cannot participate in crisis preparedness which makes the crisis participation more orderly and efficient (Elshaer, 2021). The most effective motivator for companies to participate actively in crisis preparedness is government policy encouragement (Li, 2016). The government encourages managers to do their best to partake in crisis preparedness, the government develops a set of targeted procedures to make it easier for businesses by providing technological, financial, strategy, and human resource support (Shi, 2019). The government's reasonable use of social resources may greatly alleviate the stress of disaster mitigation for businesses (Kong & Sun, 2021).

*H3: Government support positively influences crisis preparedness*

Previous research has revealed contradictory findings regarding the relationship between an organization's crisis preparedness and its size (Wisnblit, 1989). According to Reilly (1987), increasing size may result in decreasing crisis preparedness. A large business may probably produce a greater impact on its environment in many aspects than a small organization. According to Silva (2015), in comparison with small organizations, large organizations are more likely to display structural inertia; and thus be less able to respond quickly to an emergency. In contrast, there is other research on the association of the size with various organizational outcomes suggesting that large organizations may be more prepared for crisis (Reilly, 1987). Accordingly, the following hypothesis is formulated:

*H4: Organization size and capabilities positively influence crisis preparedness*



**Figure (3):** The theoretical framework for the study

## Methods

### Sampling and data collection

After gathering relevant background information from the investigated hotels and travel agents, phone calls were made to human resource managers and /or managers to gain an opportunity to distribute the onsite or online questionnaire on their properties. All questionnaire forms were distributed in the mid of 2021. A cluster sample of 30 five-star hotels and 20 travel agents located in the Greater Cairo region in Egypt was selected. Prior to disseminating the questionnaire, we confirmed that all participant responses would be kept completely anonymous in order to avoid any desirability bias and our findings would be constrained to a statistical model. A total of 450 questionnaires were collected; 315 and 135 questionnaires were collected from hotels and travel agencies respectively. Only 370 surveys, 260 from hotels and 110 from travel agencies, were valid for the final data analysis representing an 82% response rate. Roughly, 80 questionnaires were excluded due to incomplete or biased responses. The respondents' profiles of the study were presented in Table (2).

**Table (2): Respondents' profiles**

Items		Frequency	Percent
Type of organization	Hotel	260	70.27
	Travel agency	110	29.7
Gender	Male	259	70.0
	Female	111	30.0
Age	< 30 years	190	51.4
	30-40 years	126	34
	> 40 years	54	14.6
Educational level	Master's degree	20	5.5
	Bachelor's degree	228	61.6
	High school	122	32.9
Years of experience	< 5 years	98	26.5
	5 - 10 years	197	53.2
	> 10 years	75	20.3
Job status	Permanent	210	56.8
	Contractual	130	35.1
	Daily Wagers	30	8.1
Job level	Managers	168	45.4
	Operative workers	202	54.6

### Survey instrument development

A quantitative approach was deployed to test the research hypotheses by a questionnaire that was established based on a thorough revision of related studies. The questionnaire consists of six categories; namely, employees' skills and experience, the role of management, organization size and capabilities, government support, crisis preparedness, and respondents' profiles. However, despite the excessive literature related to employees' skills and experience, the

role of management, organization size and capabilities, and government support, there is no globally accepted instrument to measure these variables. Thus, we developed a survey instrument from the related literature to measure these variables. First, we measured employees' skills and experience by ten items based on (Herbane, 2013). While the role of management was measured by ten items conceptualized from (Burhan *et al.*, 2021; Ghaderi *et al.*, 2021; Giousmpasoglou *et al.*, 2021; Grossman, 2020). The organization size and capabilities were measured by four items developed from (Shiyan, 2004; Reilly, 1987). Likewise, four items were used to measure government support based on (Burhan *et al.*, 2021; Kong & Sun, 2021; Reilly, 1987). Further, crisis preparedness (six items) was adapted from (Labaš, 2017). Finally, the last section contains the profiles of respondents. All of the items for the questionnaire were assessed by five-point Likert scales ranging from “strongly disagree = 1” to “strongly agree = 5). We checked and assessed the questionnaire validity through three phases.

*Phase one*, the questionnaire was reviewed by three academic professionals once completed. These three specialists were asked to verify the surveys' content validity and provide clarifications. Their suggestions showed that some statements were unclear while others were complicated or too long; they also recommended additional questions to get more demographic and work-related data. As a result, appropriate changes were made. *Phase two*, a pilot study was conducted on 30 employees to identify questionnaire flaws, structuring, and design concerns as well as get their feedback. Roughly, slight modifications from the pilot study's participants were made. Thus, the final version of the questionnaire was distributed to collect data. *In phase three*, as we mentioned above, the measurements of employees' skills and experiences, role management, organization size and capabilities, and government support were extracted from the literature to fit with the research objectives. Thus, the validity and reliability of the measurement were checked through the Exploratory Factor Analysis (EFA) using SPSS, version 24. We run the EFA to explore the validity of the measurement; determine the actual items under each construct and avoid cross-loading of variables. In addition, Cronbach's alpha was used for reliability testing. The data are first checked to ensure their suitability for factor analysis. The results of the EFA reported that the overall significance of the correlation matrix was 0.000. Bartlett's test of Sphericity was 7408.167, which is very significant ( $p = 0.000$ ) in rejecting the hypothesis that the correlation matrix is an identity (Fornell & Larcker, 1981). The value for the Kaiser–Meyer–Olkin (KMO) model was 0.957 confirming the adequacy of the sample. The value of 0.946 for Cronbach's Alpha concluded the satisfactory level of internal consistency of the scale. The results showed that the data have a significant correlation and are suitable for factor analysis.

Principle component analysis with VARIMAX orthogonal rotation extracted four constructs, namely employees' skills and experiences, role of management, organization size, and capabilities, and government support with an eigenvalue greater than one, which altogether explained 62.2% of the total variance, higher than the threshold of 60% (Hair *et al.*, 2014). As presented in Table 2. the factor loading of each element loaded under each factor was higher than the threshold of 0.55 (Alsetoohy *et al.*, 2021; Fornell & Larcker, 1981), except for

ROM7,8,9,10; GS1,2, and OSC1 which have values lower than .55. Thus these items were dropped. *Finally*, the cross-loadings of items on other factors were less than 75%, see Table (3).

**Table (3):** Rotated Component Matrix

	Factor			
	ESE	ROM	GS	OSC
ESE 4	.805	.200		
ESE 1	.717		.224	
ESE 2	.688			
ESE 3	.659	.216		.220
ESE 7	.656	.210		.286
ESE 6	.652	.299	.235	
ESE 5	.613	.221	.338	
ESE 10	.588	.229	.354	
ESE 9	.567	.276	.221	.223
ESE 8	.557	.217	.201	.314
ROM 3		.843		
ROM 4	.235	.801		
ROM 6	.258	.788		
ROM 5	.290	.775		
ROM 2	.210	.766		
ROM 1	.309	.609	.412	
<i>ROM 10</i>	.463	.480	.420	.365
<i>ROM 7</i>	.377	.452	.374	.385
<i>ROM 8</i>	.423	.430	.417	.328
GS4			.816	
GS3			.811	
GS6	.263		.793	
GS5	.230		.792	
<i>GS1</i>			.414	.347
<i>GS2</i>		.228	.391	
OSC3	.220			.777
OSC4	.273			.722
OSC2	.247	.342		.609
<i>ROM9</i>	.427	.446	.345	.462
<i>OSC1</i>	.294	.358	.338	.370

*Items in italic were deleted.*

**ROM7:** *I would have the information I need to do my job backed up if I experienced a crisis;* **ROM8:** *Management has offered to pay for the training of volunteer employees in basic life support strategies;* **ROM9:** *Management performs training and simulation about crisis preparedness for all employees;* **ROM10:** *Management collaborates with internal agencies for developing activities that relate to crisis preparedness;* **GS1:***The government encourages hotels to engage in crisis preparedness;* **GS2:***The government guides organizations in crisis preparedness orderly and efficiently;* and **OSC1:** *Firm size and capabilities effect in increasing control over possible hazards.*

### Data analysis and hypotheses testing

The SmartPLS-SEM software, version 3.2.8, was run to analyze the research data and test the hypotheses. The PLS technique has been extensively operationalized in the field of tourism and hospitality research for several reasons (Alsetoohy *et al.*, 2021; Alsetoohy *et al.*, 2019). PLS is more suitable for small sample size, prediction, and development of theories in research studies. Further, PLS is non-sensitive to the normality of data distribution. Finally, the PLS technique is working well with models that have a large number of indicators. A two-step process was deployed to test the research hypotheses using smart PLS\_SEM software; the measurement model and the structural model (Hair *et al.*, 2012).

### The Measurement model (Outer Model)

The validity and reliability for all latent variables of the study were assessed and checked to validate the research model relationships. To verify the internal reliability of the constructs, the Composite Reliability (CR) and Cronbach's alpha were checked. The convergent validity of the model was assessed by the item loadings of the indicators, CR, and the average variance extracted (AVE). Furthermore, the Heterotrait-Monotrait (HTMT) ratio of correlation and square roots of AVE were utilized to establish the discriminant validity. Finally, the variance inflation factor (VIF) was calculated to assess the collinearity of the constructions. Table (4) illustrates that the Composite Reliability (CR) and Cronbach's alpha values for all latent variables were above the floor of .7 (Hair *et al.*, 2012). These results confirmed the internal consistency of the research model. Additionally, the item loadings were above .7 (Hair *et al.*, 2010) except for GS2 and GS2 that have values greater than 0.50. We kept those two items to validate the CR of the government support construct (Fornell & Larcker, 1981). Thus, item loadings and CR values were greater than 0.7 (Hair *et al.*, 2012) and the AVE values were above the value of .5 (Fornell *et al.*, 1981; Alsetoohy *et al.*, 2021), which establishes the convergent validity. Likewise, all constructs correlations were lower than the square root of AVE of their respective constructs (Alsetoohy *et al.*, 2019, 2021; Fornell & Larcker, 1981), see Table (5), which establishes the discriminant validity. Eventually, the higher value of VIF is 3.4 which is lower than 5, confirming that there are no multicollinearity issues between the model constructs (Ringle *et al.*, 2015).

**Table (4): Item loadings and construct reliability and validity**

Measures	Factor loadings	Mean	Cronbach's Alpha	CR	AVE
<b>Employees' skills and experience</b>			0.910	0.925	0.554
Employees are very familiar with evacuation procedures and they can continue operations from a different location.	0.753	4.222			
Being trained in crisis	0.701	4.262			

response and receiving crisis preparedness orientation.					
If a crisis occurred at my workplace, I am familiar with our strategy for communicating with my coworkers from dispersed or emergency locations (such as websites, cell phone numbers, e-mail).	0.746	4.076			
When certain types of crises happen, every employee knows what his or her job is, and employees are prepared for various crises.	0.760	4.132			
Having the necessary emergency supplies and equipment.	0.740	3.903			
Employees' skills and experience from previous mistakes helped in taking corrective action.	0.767	4.014			
Employees' skills and experience improve the organizational ability to both participate in the prevention procedures and respond to warnings.	0.777	3.932			
Employees know where the closest emergency exits are to the office/workstation.	0.719	4.035			
Employees would have access to crisis information through the intranet and internet technology.	0.728	3.984			
My hotel has a crisis preparation manual and all staff knows where to find it.	0.751	3.895			
<b>Role of management</b>			0.922	0.939	0.720
Management is knowledgeable about its role in a crisis and implements security measures to secure employees and customers.	0.793	3.986			
If my organization experienced a crisis, I would continue to be covered by the firm's	0.820	4.138			



employees' benefits and would be paid until we were able to reopen.					
Management ensures that employees have the tools they seek involving supplies, resources, policies, and problem-solving assistance which need to perform well on the front line.	0.886	4.103			
In times of crisis, management updates telephone lists involving titles and names to collaborate with stakeholders.	0.877	4.081			
Management collaborates with government agencies to develop the most effective response strategy.	0.845	4.259			
Employees have been given a basic emergency preparedness kit by the management.	0.866	4.095			
<b>Government support</b>			0.887	0.922	0.747
The government provides economic support for businesses to participate in the crisis preparedness process.	0.887	3.889			
The government provides hotels with stimulus and legislative assistance packages.	0.825	3.846			
The government provides tourist organizations with information and logistic support.	0.858	3.900			
The government provides tourist organizations with training initiatives for crisis handling.	0.886	3.889			
<b>Organization size and capabilities</b>			0.759	0.861	0.674
Size and capabilities affect communication and information distribution.	0.809	4.100			
Large organizations may be able to have better strategic planning and organizational preparations than smaller ones.	0.836	3.911			

Size and capabilities enable responses quickly to emergency situations.	0.817	3.776			
<b>Crisis preparedness</b>			0.867	0.900	0.600
We are prepared for different types of crises	0.770	4.054			
Our preparation scope to cope with a crisis is good	0.757	4.419			
We know which types of crisis we will be able to cope with without severe damage	0.792	4.278			
We have good knowledge regarding the different phases of organizational crises	0.775	4.292			
We know what to do at every possible phase of an organizational crisis	0.771	4.408			
In a crisis, we know whether it is right to be reactive or proactive.	0.783	4.305			

**Table (5) Correlation Matrix and Fornell-Larcker Criterion**

Construct	CP	ESE	GS	OSC	ROM
<b>Crisis preparedness (CP)</b>	<b>0.775</b>				
<b>Employees' skills and experience (ESE)</b>	0.722	<b>0.744</b>			
<b>Government support (GS)</b>	0.603	0.539	<b>0.865</b>		
<b>Organization size and capabilities (OSC)</b>	0.604	0.602	0.417	<b>0.821</b>	
<b>Role of management (ROM)</b>	0.659	0.641	0.482	0.522	<b>0.849</b>

*The square roots of AVEs for the research variables are in Bold*

## Results

The  $R^2$ , the  $p$  values, and the significance of the path coefficient ( $\beta$ ) were used to assess the research structural model. As shown in Figure 2, the  $R^2$  value of the research model achieved 65% for the dependent variable which establishes a substantial explanatory power of the research model (Chin, 2010). Additionally, the values of  $p$  and the path coefficients refer to statistical significances between the research variables, see Table (6). The results of the study indicated that employees' skills and experience have the strongest positive influence on the organization's crisis preparedness ( $\beta = 0.336, p = 0.000$ ), which supports H1. Also, the organization size and capabilities have positive influences on the organization's crisis preparedness ( $\beta = 0.181, p = 0.000$ ), which supports H2. Likewise, the role of management was found to have a positive relationship with the organization's crisis preparedness ( $\beta =$

0.237,  $p = 0.000$ ), which supports H3. Eventually, the findings of the study reported a positive relationship between government support and the organization's crisis preparedness ( $\beta = 0.232$ ,  $p = 0.000$ ), which supports H4.

**Table (6): Hypotheses test**

No	Hypothesis	B	P Values	Results
H1	ESE -> CP	0.336	0.000	Supported
H2	OSC -> CP	0.181	0.000	Supported
H3	ROM -> CP	0.237	0.000	Supported
H4	GS -> CP	0.232	0.000	Supported

## Discussions

The willingness of management to change existing policies and plan for potential crises has an impact on crisis management success (Pappas, 2018). In that respect, tourism and hospitality management is becoming increasingly concerned with crisis preparedness and enhancing business resilience. The current study attempted to investigate factors influencing crisis preparedness in the Egyptian tourism and hospitality industry; four important factors were chosen; namely, employees' skills and experience, the role of management, government support, and organization size and capabilities .

The study reported that there is statistical evidence to suggest that employees with more work experience have a higher perception of crisis preparedness than employees with less work experience, so that the businesses' employees who have been previously impacted by a crisis may be able to mitigate or control crises due to their accumulated experience and skills. These results come to be consistent with the findings of Elshaer and Marzouk (2019); Han and Nigg (2011); Lindell and Perry (2000) and Wang and Wu (2018) who claimed that employees' skills and experience may encourage employees to gather more information about crises and as result, implement them for better crisis preparedness; an employee who experienced a crisis probably has a higher risk perception than someone who hasn't had such an experience. In the same vein, Hall et al. (2020) argued that employees' skills and experience are an important determinant of organizational success, employees with prior crises experience should have a strong motivation to be better prepared for future disasters. However, this finding contradicts the findings of Albattat and Mat Som (2019) who found a negative relationship between the two variables. Also, Reilly (1987) confirmed that organizational actions are frequently defined by fundamental assumptions created by employees that are hard to change. In this regard, Elshaer (2021) revealed that employees' beliefs and culture may limits their ability or intention to deal with crises, arguing that

employees may believe in dealing with and planning for crises is not their duty and is limited to management.

Furthermore, there is a significant relationship between the role of management and crisis preparedness. This finding was consistent with the findings of Promsri (2014) and Bilic et al. (2017) which stated that management plays a key role in the implementation and development of procedures and protocols of crisis preparedness. Regarding their role in a crisis which their organization may have to face, hotels and travel agents management learned about how they must react to an unexpected threat, because of their role, responsibility, and discretion, managers can do more about crisis preparedness. In this essence, Quek (2019) asserted that various potential risks must be identified and analyzed by management, assess potential consequences and develop suitable contingency plans to deal with the crisis. According to Enander (2015) and Hasan (2020), the managers' role in relating to crisis management is to plan for future crises and look for preparation activities, they are the main decision-makers in crisis preparation and planning.

Moreover, the results indicated a significant relationship between government support and perceived crisis preparedness. These results come to be consistent with the findings of Kong (2020) who claimed that the government plays an important role in crisis preparedness and the government promotes management to participate in crisis preparedness through policy guidance, legal guidance, and practice guidance. The government has a significant role to play in developing and maintaining a stable and conducive environment which can impact employees' sense of confidence in coping with crises and encourage hotels to take proactive steps to plan for emergencies (Kong & Sun, 2021).

Another important finding of the current study is that there is a significant correlation between organization size and capabilities and crisis preparedness. This result was supported by the findings of Wisenblit (1989) who claimed that large organizations appeared to be more conscious of the potential for a crisis that could befall them and tended to ramp up with more preparedness. Previous research indicated a strong positive relationship between organizations' size and crisis preparedness (Chikoto, 2013; Graham, 2015; Han & Nigg, 2011; Weible, 2010). One plausible reason for this result is that larger organizations have the essential resources to prepare and mitigate crises (Dahlhamer & D'Souza, 1997). Overall, this study confirms that all the stakeholders and their capabilities must be involved in planning and implementing the preparedness procedures, by being made aware of identified the industry-related potential risks through communication with the tourist organization managers and owners. These findings go in line with the findings of Elshaer (2021) who prioritized the government role and its authority in

supporting tourism and hospitality businesses through government initiatives, economic motivators, and legislation. He also confirmed the importance of the role played by employees, describing them as a valuable asset and a major contributor (shareholder) to the business' success. Additionally, the management should seek for promoting the preparedness culture among the organization's employees; appointing a pre-designated emergency team, multidisciplinary in nature, usually consisting of managers and staff specializing in security and operations. The study's findings also confirm the importance of the organization's resources and physical capabilities needed to enable the personnel to identify and alleviate the potential risks and emergencies.

### **Conclusions and Implications**

The current study contributes to the literature by investigating and assessing the most crucial factors that affect the crisis preparedness of tourism and hospitality establishments. To our knowledge, this study is a pioneer to investigate these factors in both the tourism and hotel sector. Additionally, the validated framework could be used as a start point for scholars to explore other factors that may affect the organization's crisis preparedness. Likewise, the study filled a pivotal gap in the literature by providing academia with a validated measurement to measure these factors (i.e. employees' skills and experience, the role of management, organization size and capabilities, government support).

The importance of preparedness in tourism and hospitality crisis management should be highlighted and preparedness systems may assist mitigate the crisis and potential impacts (Henderson, 2007; Albattat & Mat Som, 2019). The tourism and hospitality business is one of the most vulnerable businesses to crises. Crises are occurring more frequently and in more complex ways than ever before, influencing the tourism and hospitality industry and other related businesses. Hotels, for example, that are open 24 hours a day become an easy target for criminals and terrorists. While travel agencies are prone to face different financial crises. Thus, it is better to be well prepared to mitigate and overcome the possible various crises. The results of this study indicated the critical role of the investigated four factors (employees' skills and experience, organization size and capabilities, the role of management, and government support) in reinforcing the organization in times of crisis. Thus, research all the tested hypotheses were accepted.

Additionally, hotels and travel agencies managers must have crisis preparedness schemes in place for all types of crises of different severity and urgency; they should specify the role of each stakeholder, classify potential risks and crises based on the likelihood of occurrence, the severity of the

impact, and the level of urgency to be better prepared. Management should set a crisis preparedness team, effective organizational crisis communication, and evaluation of emergency plans. Managers need more training and awareness of the value of crisis planning and preparedness. A proactive and crisis-prepared organization should have dynamic and effective tools in place to discover early warning signs so that the negative effects of any crisis can be minimized. In addition, through efficient publicity, the government must create appropriate disaster prevention measures, issue corresponding practices, and ensure that management understands the ways and methods to participate in crisis preparedness.

### **Study limitations and further research**

Some limitations regarding the current study must be analyzed to put the results into perspective. First, the participants in this study were staff in Egyptian hotels and travel agents, therefore, the findings may not be applied to other industries due to the nature of the tourism and hospitality business. Second, the findings were derived from data collected within a specific period 'the mid of 2021'. As a result, additional empirical longitudinal research is required to give more positive conclusions. Lastly, the current study analyzed only four organizational factors (i.e employees' skills and experience, the role of management, organization size and capabilities , government support). Future research may add more factors that are relevant to crisis preparedness. The study recommends further research to fully comprehend how cultural differences affect crisis preparation and planning. Further research should broaden the scope to use the results of the current study and compare the employees' perceptions of hotels and employees at travel agencies with other industries. Finally, further research should also investigate changes in employees' perceptions due to the impact of COVID-19, as this pandemic has a significant impact on the hospitality industry.

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## العوامل المؤثرة في الاستعداد للأزمات في صناعة السياحة والضيافة في مصر: تصور الموظفين

### الملخص العربي

أصبحت الأزمات بالنسبة لقطاع الأعمال جانباً لا مفر منه بشكل متزايد، ولأن قطاع الفنادق والشركات السياحية جزءاً هاماً من مجتمع أعمال صناعة السياحة والضيافة الواسع، فيعدون أكثر عرضةً لمثل هذه الأزمات التي قد تدمر صورتهم كمنظمات سياحية ربحية. وبالتالي تهدف هذه الدراسة للتعرف على العوامل التي قد تؤثر على الاستعداد للأزمات في صناعة السياحة والضيافة، فقد تم اختيار أربعة عوامل وهي (مهارات وخبرات الموظفين، دور الإدارة، حجم وقدرات المنشأة، ودعم الحكومة) وذلك لدراسة تأثيرهم على كيفية الاستعداد للأزمات في صناعة السياحة والضيافة في مصر. تم جمع البيانات من موظفي 30 فندق فئة الخمس نجوم و 20 شركة سياحية في نطاق منطقة القاهرة الكبرى، حيث تم الحصول على عدد 450 استمارة استبيان: عدد 315 من موظفي الفنادق وعدد 135 استمارة من موظفي الشركات السياحية، وكان مجموع الاستبيانات الصالحة للتحليل 370 استمارة: 260 من الفنادق و 110 من الشركات السياحية. أظهرت نتائج تحليل النمذجة الهيكلية أن جميع العوامل التي تم دراستها لها تأثير إيجابي على استعدادات الفنادق والشركات السياحية للأزمات والتعامل معها بطرق أكثر كفاءة. أيضاً أظهرت النتائج أن مهارات وخبرات الموظفين لها التأثير الأقوى من بين العوامل على الاستعداد والتعامل مع الأزمات المحتملة. وأخيراً تقدم هذه الدراسة مقياس جديد تم اعتماد صدقه وثباته لقياس هذه العوامل إضافة الي توصيات نظرية وعملية.

**الكلمات الدالة:** صناعة الضيافة، شركات السياحة، إدارة الأزمات، الاستعداد للأزمات، مهارات الموظفين وخبراتهم، دور الحكومة، حجم المنشأة وإمكاناتها.