THE IMPACT OF TRAINING ON CRISIS MANAGEMENT: HUMAN RESOURCE DEVELOPMENT MEDIATIONVARIABLE USING (SEM)

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ABSTRACT

*The study aimed to verify the impact model validity of Human Resource Trainingon Crisis Management. This model included an (external factor)Human Resource Training, and an (internal factor)Crisis Management. The study also aimed to verify the true forecasting of the model Human Resource Developmentas a (Mediation)*variable *between the Human Resource Training and Crisis Management. For achieving these objectives, the study used a quantitative approach to analyzing the data including the structural equation modeling(Confirmatory Factor Analysis-CFA)(AMOS,21) to test the validity of the research model. The study reached to a set of results, from which the most important result was that the Human Resource Training had a positive impact on Crisis Management. The study also reached the existence of a positive impact of Human Resource Trainingmodel on Crisis Managementthrough its positive impact on the Development of human resources, which was as Mediation variable.*

Keywords: Human Resource Training, Human Resource Development, Crisis management.

INTRODUCTION

Due to the rapid and successive development in the environment of organization and its impact on the activities of the organization, none can fail to realize the important role of training in business organizations to keep pace with this development. This can be through the development of individual and organizational capacity. Training also helps in improving the energy and abilities of the individual to work, and contributes to their abilities to cope with crisis management that they may face. Hence, the research model in this study as shown in Figure (1) is based on three potential key factors: training, human resource development and crisis management. These three factors are represented by several measured variables. While reviewing previous studies in order to determine the factors of the study, the researcher adopted three key variables for the study: training as the independent variable, human resource development as a mediator factor and crisis management as the dependent variable. The relationships among these variables are illustrated as follows.

As far as training is concerned, it is an organized activity that provides trainees with the necessary knowledge and skills that enable them to absorb the concepts and reconfigure the behavior as well as apply what they have learned to different situations more efficiently to achieve the desired results (Saad, 2012). The study is based on the most widely used the training model, known as Adde Model, which consists of estimation of training needs, planning, designing the training, the training phase, the evaluation phase and the learning phase. This is because such model has been proved to be a benchmark for training in some of previous studies, including (Abdelgadir & Elbadri,2001), (Al-Tarawneh,2011) and (Ata Allah,2008). For crisis management, which is defined as a range of administrative activities and efforts to counter or reduce the negative effects of the crisis (Aboqahv,2002), in this study, it was measured by adopting the proposed scale by (Pearson& Mitroff,1993). It consists of five stages for crisis management: easing the crisis, the preparation phase, the phase of containing the damages and the learning phase. This has been adopted in some previous studies (Zuelv,2013 ; Awada,2008; Al-Shamrani,2004; Wang,2009).

With regard to the third factor, human resources development, it is defined as the development of skills and abilities of individuals to perform the prescribed or assigned work. It consists of several dimensions: planning skill, communication skill, management skills and positive attitudes. These skills are the basic skills that should be available among employees to increase their abilities in crisis management as pointed out by some previous studies (Ayad,2014; Riham,2008; Bokovs,2007).

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

The Relationship between Training and Crisis Management

Some studies have called for the need of training since it plays a role in dealing and managing with crises. For instance, (Moriarty et el, 1993) confirmed that lack of training among employees is one of the reasons behind their bad crisis management. In addition, (Poland & Pitcher, 1992) pointed out at the need for training workers on how to prevent crises because of its effect in raising their abilities to deal with them. The results of an earlier study (Edwards & William, 1992) indicated that there is a difference between the trained and untrained employees in terms of their abilities to deal with crises as it was found that those trained employees were more willing and able handle and manage crises. (Abdel-Moneim et al, 2013) also confirmed through the results of their study that there was a positive relationship between training and crisis management. Based on this, the first research hypothesis: “there is a positive and direct impact of training on crisis management” was formed.

The Relationship between Training and Development of Human Resources

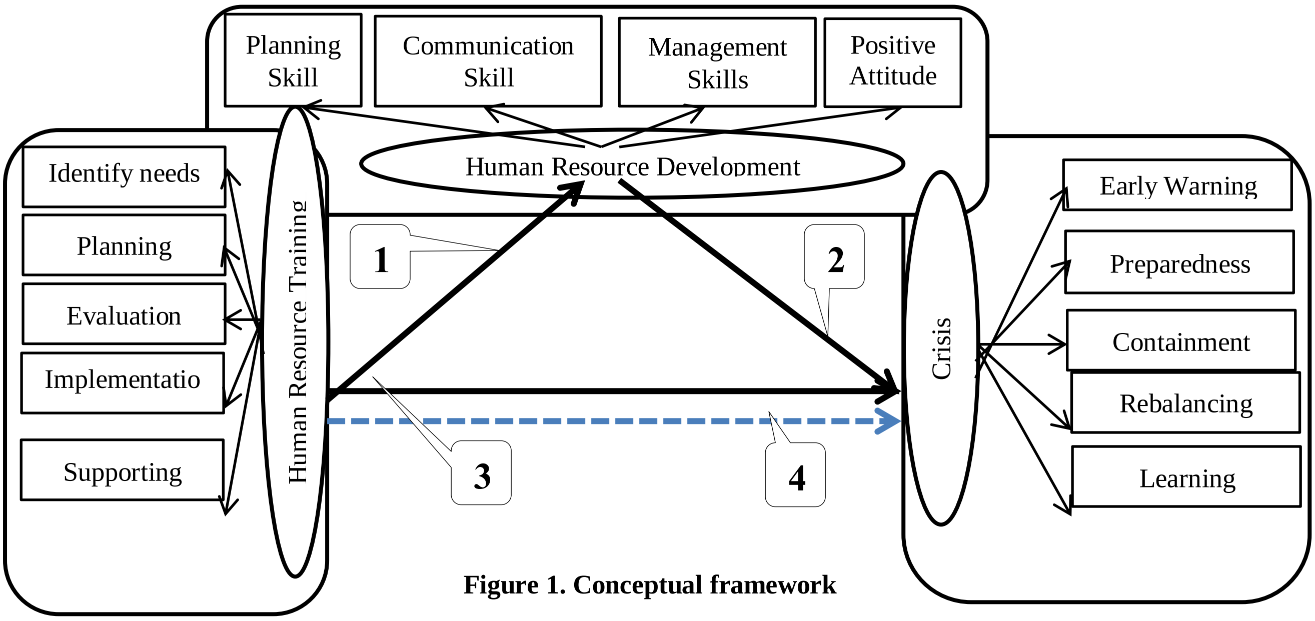
Today, training is a fundamental and important matter because of its direct relationship to the development of human resources. Training has attracted a great interest among many academics and researchers to raise and increase human recourses’ skills and competencies in many areas, including business. Specifically, the relationship between training and human resource development has attracted the attention of many researchers (e.g., Daniels,2003; Teresa,2003; Al-Khawlany,2005). This is because of the correlation between training and development of human resources, thus reflecting its positive impact on the efficiency of the organization. Those researchers also confirmed that training contributes significantly to the development of employees’ skills, which, in turns, contributes to achieving a good return on investment in training. (Al-Tuqai & Askar,1987) stressed the urgent need for giving attention to training as a means to developing human recourses in business since it plays a role in supporting the growth of the organization. Moreover, as indicated by (Teresa,2003), training practices have impact on the level of service providence or delivery and stressed that the provision of intensive and properly planned training programs contributes significantly to the improvement of employees’ abilities, which in turns, has positive effect on the level of service delivery. Thus, based on this previous review of related studies on the relationship between training and human resource development, the second research hypothesis of this study: “there is a positive and direct relationship between training and human resource development” was formed.

The Relationship between Human Resource Development and Crisis Management

The relationship between human resource development and crisis management is one of the topics gaining the attention of many researchers (Amran,2014)&(Oburukbah,2013) who assumed that development of human resources would have impact on crisis management. (Raffan,1988) pointed out at the need for developing knowledge, skills, preventive awareness and planning of crisis management so that the organization can deal with crises and manage them in the right ways when they occur. (Aliyu& Radwan,1994) related the success and failure of the organization's management in facing its crises to the availability of systems and communication skills. (Al.Ashqar,2012) agrees with (Al.Humaidy,2010) regarding the effectiveness of communications in crisis management, while (Abdel Al.Aal,2009) and (Al.Thwaihi,2004) focused their studies on the role of planning skills in crisis management. In addition, the results of other two studies (Ziada, 2012& Al.Rathie, 2011) confirmed the relationship between the development of employees'' skills and the ability and efficiency of the organization handling and managing crisis. Based on this, the third research hypothesis: there is a positive and direct impact of human resource development on crisis management" was formulated in this study.

The Relationship between Training, Crisis Management and Development of Human Resources

Based on what has been previously discussed, especially the relationship between training and development of human resources confirmed by studies of (Daniels,2003) and (Al.Khawlany,2005) and the relationship between human resource development and crisis management confirmed by (Ibrahim,2003) and (Ziada,2012), the current study assumed that the factor of human resource development would be a mediator in the relationship between training and crisis management. Therefore, the fourth research hypothesis: there is a positive effect of training on management of crises through human resources development.


Planning Skill
Communication Skill
Management Skills
Positive Attitude
Human Resource Development
Identify needs
Planning
Evaluation
Implementatio
Supporting
Human Resource Training
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Crisis
Early Warning
Preparedness
Containment
Rebalancing
Learning

Figure 1. Conceptual framework

RESEARCH OBJECTIVES

1. To verify the real relation between the Human Resource Training and Crisis Management.
2. To determine the relation between the Human Resource TrainingandHuman Resource Development.
3. To evaluate the relation between Human Resource Developmentand Crisis Management.
4. To test the real role of the Human Resource Development as Mediation variable in the relation between the Human Resource Training and Crisis Management.

METHOD

Population & Sample

The population of the current study is represented by employees National Oil Corporation in Libya. And due to the large size of the population, so the sample size was determined by (10%) of the study population (Sekaran,2003), but the size of sample was (460). He distributed (460) questionnaires on the study sample; (383) questionnaires have been obtained where (77) thereof lost and (9) thereof excluded due to non-clear reply therein by the by the respondents. So the final number of questionnaires entered to the analysis was (374) questionnaire (81%) of the total distributed questionnaire.

Research Instruments

In this regard, it is relied upon the questionnaire as a tool to gather the necessary information for this study as one of the most suitable scientific research tools that achieve the survey study objectives and to obtain information and facts associated with a determined reality, for achieving the study, a questionnaire is made for the purposes of processing the studying test the validity of a proposed model for this study.

Confirmatory Factor Analysis

The Structural Equation Modeling (AMOS) model-fitting program is used to test the validity constructs are to test the research hypotheses. The overall model fit is assessed by using four indices of the model goodness-of-fit: (1) the chi-square statistics; (2) the comparative fit index (CFI) greater than(0.90) (McDonald & Marsh,1990); (3) the minimum value of the discrepancy between the observed data and the hypothesized model divided by degrees of freedom (CMIN/DF) or normed chi-square(Marsh & Hocevar,1985); (4) In addition (RMSEA) of between (0.08) to (0.10) indicates a mediocre fit and would not employ a model (RMSEA) greater than 0.1 (>0.1) (Mac Callum et al, 1996) .

Construct Validity

According to (Hair, et al, 2010) the function of factor loading composite reliability (CR) and (average variance extracted-AVE) is to decide the convergent validity in case it is equal to or greater than (0.5) (≥0.5); the composite reliability should also be equal to or greater than (0.7) (≥0.7). Besides that, (AVE) reading values should be greater than (0.5) (≥0.5) and greater than (variance shared-SV) (Fornel and Larker, 1981).

Testing the Theoretically Hypothesized Research Model Using Integral Structural Equation Modeling

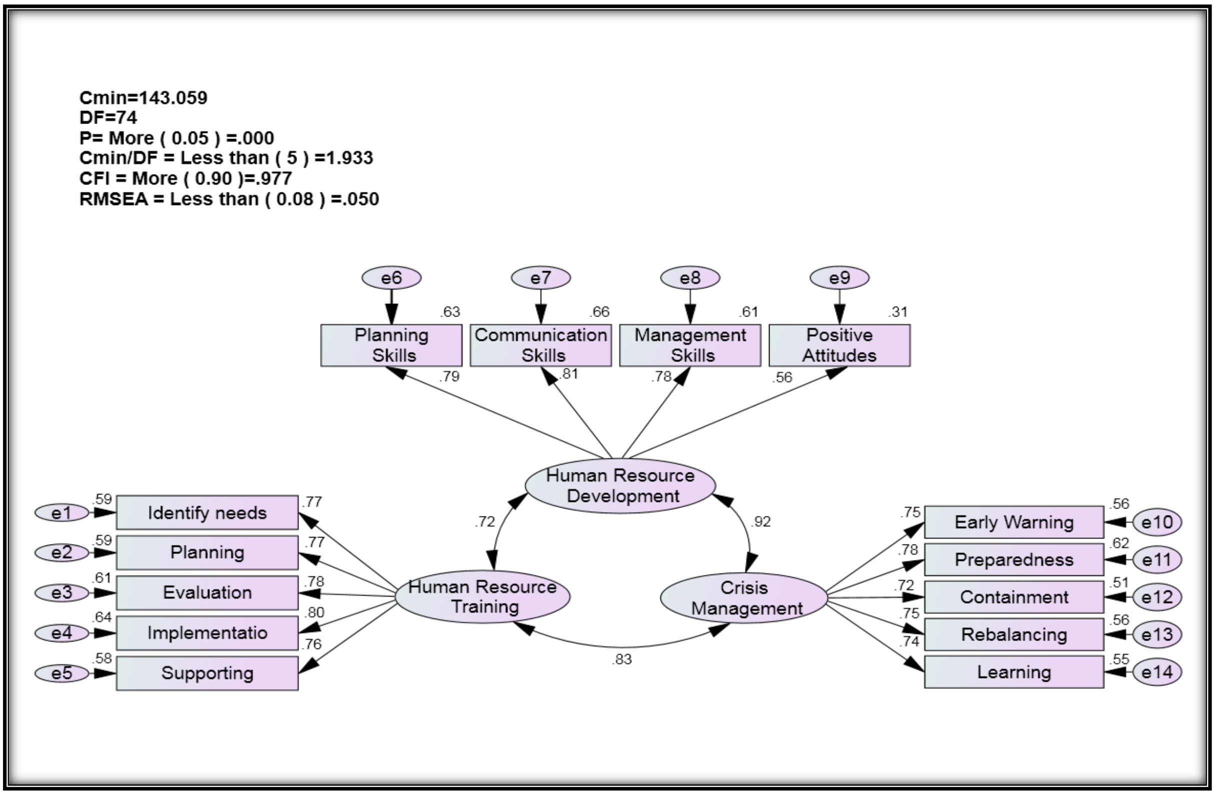
In this study used the structural equation modeling (SEM-AMOS) for testing the research hypotheses and objectives and test the relationship between the Human Resource Training and Development of Human Resource and Crisis Management.

RESULTS

Testing the Standard Theoretical Research Model Using a (CFA)

Main Standard Model

After determining the statistical expectations compulsory to the analysis using Structural Equation Modeling, the sample shall be verified in terms of the identical to the sample data, then the hypotheses shall be verified in the default theoretical model. Through the figure (2) which shows the scheme of default theoretical model of the study using the method of Structural Equation Modeling by (AMOS).It is shown that there is an identical between the theoretical model with the data or factual event in the study environment. Furthermore, the scheme shows the identical indicators of model with the reality or the data collected from the study environment. Also clear that there is not a high correlation between the values of the underlying factors, this shows lack of a Multicollinearity, which leads to Offending Estimation in structural equation modeling.


Cmin=143.059
DF=74
P= More (0.05) =.000
Cmin/DF = Less than (5) =1.933
CFI = More (0.90)=.977
RMSEA = Less than (0.08) =.050
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Planning Skills
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Human Resource Training
Crisis Management
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Early Warning
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Containment
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Learning
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Figure 2: Modified Measurement Model

Testing the Research Model Fit with Sample Data

Based on the values and indicators of model consistency with the sample data (Model Fit Indices) as shown in the table (1) and figure (2), it is shown that there is a correspondence between the default form (Human Resource Training, Human Resource Development, Crisis Management) and the data collected, upon and that based on the value of the (CMIN)

(143.059), free degrees (74)and the significance level (0.000) as (statistic equation) because the significance level affected by the sample size when it was more than (200)(Hair&Black,2010). For that reason, the quality of consistency has been tested through other indicators such as standard (CMIN/DF) (relative), which was (1.933) and less than the specified criterion (5). As shown, the comparative consistency indicator value equal to (0.977), which was greater than the standard test (0.90); this is indicated and confirmed that the default model has links or relations between variables; not as the zero model (no relations between factors) as in the default model; furthermore, (RMSEA) index was (0.050) and this confirmed that the default theoretical model includes its presence in the overall population.

Table 1

indicators consistency	*Standard Model figure : 2*	*Structural model figure : 3*	*Function value on the quality of conformity*
	index value	*index value*	
CMIN	143.059	143.059	---
DF	74	74	---
P	0.000	0.000	Non
CMIN/DF	1.933	1.933	Less than (5)
CFI	0.977	0.977	More (.90)
RMSEA	0.050	0.050	Less than (.08)

Testing the efficiency of factors saturations in the model

Based on these evidence showing the goodness of fit among the measurement model and the real study context through the collected data, it was possible to perform or carry out factor loading to check the internal or relationships hypothesized in the research model.

Such loading means that relationships between the latent factors of the model and their underlying variables that represent them such as the relationship between the variable of Human Resource Trainingand its underlying variables (Identify needs, Planning, Evaluation, Implementation, Supporting).

The same can apply to the other remaining latent factors and their underlying variables in this study. Here, the value of this relationship should be at least (0.50). As seen in Figure (2) and Table (2), the saturation or correlation estimates of the factors exemplified by (rectangle shapes) and the underlying variables represented by circles were great; besides that, they exceeded (0.50). These are normally termed factor loadings. In this research, these loadings, which were all statistically significant, ranged between (0.81), which was the highest correlation between the factor of the Human Resource Development and its variable (Communication Skill) and (0.56), which was the lowest estimate between the factor of Human Resource Development and its variable (Positive Attitudes). For other remaining estimates, they are illustrated in Figure (2) that shows the measurement model. Moreover, Table (2) depicts the (T-value) for every relationship between the factors and its underlying variables. The results show that the value was higher than (1.964) for each relation, which was also statistically significant or the significance level (0.05). Hence, considering the (T-value) was greater than (1.964), this is indicative of the statistically significant level, thus confirming of the relationship between the factors of the model and the underlying variables.

Table 2

Observed variables	*Dimensions*	*Estimate*	*S. E*	*C. R*	*P*	*Loading*	*S. M. C*
Human Resource Training	Identify needs	0.944	0.059	15.802	0.000	0.77	0.59
	Planning	0.913	0.057	15.829	0.000	0.77	0.59
	Evaluation	0.966	0.059	16.281	0.000	0.78	0.61
	Implementation	1.000	-	-	-	0.80	0.64
Human Resource Development	Supporting	0.969	0.061	15.711	0.000	0.76	0.58
	Planning Skill	1.000	-	-	-	0.79	0.63
	Communication Skill	0.970	0.057	16.833	0.000	0.81	0.66
	Management Skills	0.981	0.061	16.007	0.000	0.78	0.61
	Positive Attitudes	0.494	0.045	10.806	0.000	0.56	0.31
Crisis Management	Early Warning	0.697	0.048	14.423	0.000	0.75	0.56
	Preparedness	0.958	0.062	15.235	0.000	0.78	0.62
	Containment	0.870	0.063	13.808	0.000	0.72	0.51
	Rebalancing	0.924	0.063	14.483	0.000	0.75	0.56
	Learning	1.000	-	-	-	0.74	0.55

S.E. Standard Error, C.R.: Critical Ratio, P:Probability, SMC: Squared Multiple Correlation

Testing links between factors

it is shown from figure (2) and table (3) that all links (relations) represented between the factors (Human Resource Training, Human Resource Development, Crisis Management) were statistically significant as the statistical value (T) greater than (1.964) and the significance level (probability value) less than (0.05). Such correlation proportions between the three factors ranged between rate (0.72) and the rate (0.92). Basedon this the research requires to study the structural or compositional hypotheses in the model.

Table 3

Latent variables	*Correlations*	*Latent variable*	*Estimate*	*S. E*	*C. R*	*P*	*R*
Human Resource Training	<------>	Human Resource Development	10.291	1.136	9.052	0.000	*0.72*
Human Resource Training	<------>	Crisis Management	11.958	1.257	9.508	0.000	*0.82*
Human Resource Development	<------>	Crisis Management	12.216	1.235	9.892	0.000	*0.92*

S.E. Standard Error, C.R.: Critical Ratio, P:Probability, R: Correlation.

Testing the Structural Modeling (Theoretical Model of the Study)

Structural or compositional model as shown in figure (3) differs from the standard model as shown in figure (2), where the compositional model was determined the independent and dependent variable as well as medial variable by arrow tool of one head (→). So the model will be completely identical to the study scheme. Regarding the standard model, the relations between three factors represent independent links and the independent, dependent and medial variable has not determined, so the links represented by arrow tool of two heads (↔). furthermore, we find that the model is identical to the sample data, through the compositional (structural) model, where it is not differ from the standard model upon the consistency values and indicators of the model with the sample data as expressed in the table (1) and figure (3) where it is shown that there is an identical between the default model and the data collected; value of Chi-square (143.059) and free degrees (47) as well as the significance level was statistical significance (0.000), as (statistic equation) because the significance level affected by the sample size when it was more than (200)(Hair&Black,2010). For that reason, the quality of consistency has been tested through other indicators such as standard Chi- square (relative), which was (1.933) and less than the specified criterion (5). As shown, the comparative consistency indicator value equal to (0.977), which was greater than the standard test (0.90); this is indicated and confirmed that the default model has links or relations between variables; not as the zero model (no relations between factors) as in the default model; furthermore, (RMSEA) index was (0.050) and this confirmed that the default theoretical model includes its presence in the overall population, accordingly, the key assumptions of this study shall be verified.

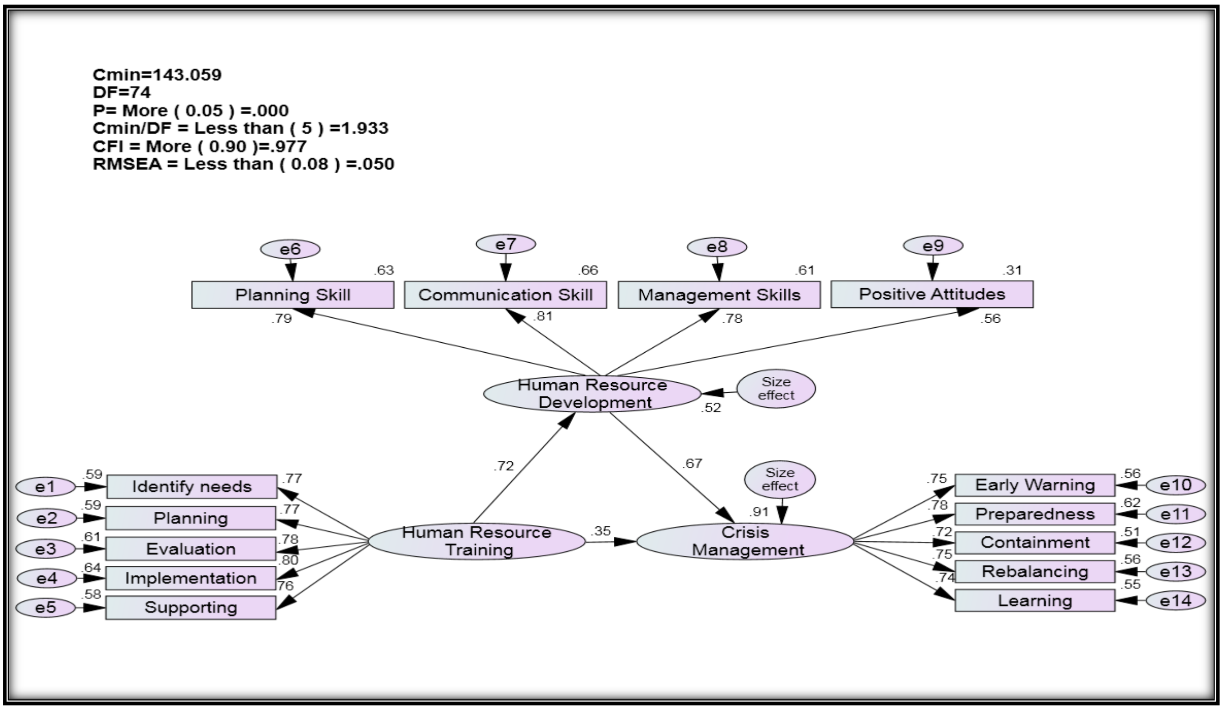
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Figure 3: Structural Model

TESTING THE MAIN RESEARCH HYPOTHESES

After confirming the efficiency of variable link or variables with its potential factors, the assumptions of theoretical model shall be tested as follows:

Human Resource Training & Crisis Management

the first hypothesis confirms that there is a positive and direct impact of Human Resource Training on Crisis Management, given the figure (3), which reflects the default theoretical model of the study as well as the table (4) that shows the outputs of Amos program; the hypothesis was a statistical significant given that the statistical value of (T) (6.074) was higher than the stake (1.964), and the value of the significance level (0.000) is significant statistically less than stake (0.05), in addition to the value of the path coefficient or standard estimates equal to (0.35) and has a positive direction which emphasizes the increased attention to Human Resource Training leads to higher Crisis Management.

Table 4

Latent Construct		*Latent Construct*	*Estimate*	*S. E*	*C. R*	*P-Value*	*S. R. W*
Human Resource Training	--->	Human Resource Development	0.667	0.055	11.979	0.000	0.72
Human Resource Training	--->	Crisis Management	0.325	0.053	6.074	0.000	0.35
Human Resource Development	--->	Crisis Management	0.674	0.068	9.895	0.000	0.67

S.E. Standard Error , C.R.: Critical Ratio , S.R.W: Standardized Regression Weights.

Human Resource Training &Human Resource Development

the second hypothesis indicates that there is a direct impact of the Human Resource Training on Human Resource Development, and given to the default theoretical model figure (3) and outputs Amos program table (4), the hypothesis was a statistical significant given that the statistical value of (T) (11.979) was higher than the stake (1.964), and the value of the significance level (0.000) is significant statistically less than stake (0.05), in addition to the value of the path coefficient or standard estimates equal to (0.72) and has a positive direction which emphasizes the increased attention to Human Resource Training leads to higher Human Resource Development, the effect size was (0.51), that means (51%) of Human Resource Development due to the Human Resource Training. This is significant impact the potential variables where it is greater than (20%) (Cohen, 1989).

Human Resource Development & Crisis Management

the third hypothesis indicates that there is a positive and direct impact of Human Resource Development on Crisis Management, as in the previous steps to the default theoretical model and outputs of Amos program scheme table (4), the hypothesis was a statistical significant given that the statistical value of (T) (9.895) was higher than the stake (1.964), and the value of the significance level (0.000) is significant statistically less than stake (0.05), in addition to the value of the path coefficient or standard estimates equal to (0.67) and has a positive direction which emphasizes the increased attention to Human Resource Development leads to ability onCrisis Management, in addition the total effect size on Crisis Management (0.83), this means that (83%) of Crisis Management due to both the Human Resource Training and Human Resource Development. This size is considered due to significant impact on the potential variables. The analysis also indicated in terms of importance of the effect that the effect sixe of Human Resource Training was (0.35), most important of Human Resource Development, which its effect size was (0.48) and the most influential on the high level of Crisis Management.

Human Resource Training & Crisis Management through Human Resource Development

The fourth hypothesis confirms that there is an indirect impact of Human Resource Training on Crisis Management, i.e.an impact through Human Resource Development. According to the table (5) and figure (3), indirect impact or relation value is (0.48), which is the total multiplied by the value of the path coefficient or estimates to relation between Human Resource Training andHuman Resource Development (0.72), the value of the path coefficient or estimates to the relation between Human Resource Development and Crisis Management (0.67), total effect or overall effect was (0.83), this resulting from the sum of the path coefficient or direct impact of Human Resource Training and Crisis Management (0.35) and the path coefficient or non-direct impact between the Human Resource Training and Crisis Management is(0.35 ±0.48).

Table 5

Independent	*Mediation*	*Dependent*	*Indirect Effect*	*Total Effect*
Human Resource Training	Human Resource Development	Crisis Management	0.48	0.83

CONCLUSION AND DISCUSSION

The aim of the present study was to analyze the impact of the direct relationship between training and development of human resources and employees' abilities to manage crises in the Libyan National Oil Institution on the one hand, and the indirect relationship between the human resourcedevelopment and employees' abilities to manage crises on the other hand. In addition, the study aimed to explore the impact of training on employees' abilities to manage crises through the development of human resources as a mediator factor. To achieve this, the current study used a questionnaire to collect the data. Based on the quantitative analysis of the data, including the structural equation modeling (SEM), the study obtained several; results, most important of which was that the direct impact of training human resources on employees' abilities to manage crises was (0.12). This is statistically significant. Such result agreed with results reported in some previous studies like (Abdel Moneim et al., 2013; Wheelr, 2001; Edwards & William, 1992) in terms of the importance of training in making employees more willing and more able to manage crises and deal with them. However, the proportion of the training effect in the context of the current study seems medium since it is higher than (0.10) and lower or less than (0.25) (Cohen,1989). This can be attributed to the weakness of the support and attention of the departments and managements responsible for training and developing human resources on an ongoing basis. Furthermore, it may be because the trainees focused more on the materialistic benefits gained by them from training than the goal or aim behind the training process, which is raising their abilities and skills.

The results of the study showed that the impact of training on human resource development was (0.51), which is higher than (0.25) (Cohen,1989). Such result suggests that the training had positive impact on developing the abilities and skills of human resources. It is also consistent with results of previous research (Al.Ashqar, 2012; Al.Rathie, 2011; Abdel.Aal, 2009). Results of the study also revealed that the indirect effect of training on crisis management through the mediator factor (human resource development) is higher than the direct effect as it was (0.48) Such result reflects the importance of human resource development in increasing employees' abilities in dealing and managing crises faced by organizations, which represents a central part of the training process. This also indicates that human resource development plays an important role as a mediator factor between training and crisis management. Based on these results, the researchers recommend that the role of human resource developed should be further activated through attention to training on an ongoing basis, and it should be regarded or looked at as an efficient means to raising employees' skills and abilities as it has positive effects on crisis management.

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