

**The Mediating Role of Employee Resilience on The  
Relationship Between Human Resource Management  
practices and Innovative Work Behaviors: An Applied study  
on EgyptAir in Cairo.**

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**ABSTRACT**

Nowadays, the success of any organizations is measured by the extent of their interest on human capital, and their ability to direct and manage them effectively. This study objective is to investigate the impact of Human Resource practices on innovative work behavior by examine the mediating role of employee resilience. The importance of this study witnessed through its contribution to reflect how Human resource management practices and its variables (recruitment-reward-training-performance) has a significant impact on employee resilience and their positive impact on Innovative work behaviors. The primary data is collected by

distribute a list of questionnaires with a total sample 384 employees at Egypt air in Cairo. The valid questionnaire is 312. The study uses Warp PLS software to conduct a Partial Least Square analysis to test hypotheses. The finding suggests that there is a positive impact of Human Resource practice on employee resilience, and represents the role of mediating employees' resilience between human resource management practices and innovative work behaviors.

**Keywords:** Human Resource Management Practices, Employee's Resilience, Innovative Work Behavior, EgyptAir company.

الدور الوسيط لمرونة الموظفين في العلاقة بين ممارسات إدارة الموارد البشرية وسلوكيات العمل الابتكاري: دراسة تطبيقية على شركة مصر للطيران في القاهرة.

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### ملخص البحث

يقاس مدى نجاح أى منظمة من منظمات الأعمال باهتمامها بالعنصر البشري، وبمدى قدرتها على إدارة هذا العنصر وتوجيهه بالشكل الفعال، ولقد أظهرت ممارسات إدارة الموارد البشرية تغييرًا كبيرًا في البيئة التنافسية الحالية. ومن هذا المنطلق تهدف هذه الدراسة التعرف على العلاقة بين ممارسات إدارة الموارد البشرية وسلوك العمل

الإبتكاري وبحث الدور الوسيط لمرونة الموظفين فى تلك العلاقة. وقد تم الاعتماد على قائمة استبيان لتجميع البيانات الأولية اللازمة لاختبار الفروض لعينة مكونة من ٣١٢ مفردة من العاملين بشركة مصر الطيران. وقد تم تحليل البيانات باستخدام أسلوب (PLS-SEM) اعتماداً على برنامج التحليل الإحصائي WarpPLS.5. وتمثلت أهم نتائج الدراسة في وجود تأثير معنوي إيجابي لممارسات إدارة الموارد البشرية على سلوك العمل الإبتكاري، وتوصلت الدراسة إلى وجود تأثير معنوي إيجابي لممارسات إدارة الموارد البشرية على مرونة الموظفين، بالإضافة إلى وجود تأثير معنوي إيجابي مرونة الموظفين على سلوك العمل الإبتكاري. كما توصلت إلى أن مرونة الموظفين تتوسط العلاقة بين ممارسات إدارة الموارد البشرية وسلوك العمل الإبتكاري. وتوصي الدراسة بأهمية دور ممارسات إدارة الموارد البشرية في بناء مرونة الموظفين وتأثيرها على سلوكيات العمل المبتكرة.

**الكلمات الدالة:** ممارسات إدارة الموارد البشرية- سلوك العمل الإبتكاري- مرونة الموظفين- شركة مصر للطيران.

## **1. Introduction:**

According to the fast-paced change in business environment and a huge competition that push organizations to be more innovative, so consequently they force their employees to be more resilient in coping with the ongoing innovation.

In most nations HRM is a pillar in the action plans. There are a limited studies concerning public sector that highlighted the new trends of Human resource management practices approach. One of the recommendations of this study is that public sector in Egypt should overcome the constraints and manage effectively and efficiency. The most successful organizations are those that manage human resource capital because the vital resources in any

organization are people (Brunetto & Beattie, 2020). Sustained organizational success will be achieved through an integrated strategic approach in order to enhance the performance and developing individual's capabilities (Piwovar-Sulej, 2021).

According to the previous studies human resource management practices can develop employee resilience. This is in turn will improve innovative work behavior. In today competitive advantage public sector organization should have a competitive Human resource management practice that contribute to the success of today's organizations. HRM refers to policies, practices and system that influence employee behavior, attitudes and performance. (Colakoglu et al., 2021).

Although, Public sector organizations need to hire, develop and train employees, established payment system and set conditions of employment, But the particularity of public sector that focus on public interest outcomes rather than private interests may add a layer of complexity, that don't fit easily with HRMP as a strategic partner in achieving organizational competitiveness and business outcomes (Tensay & Singh, 2020).

## **2. Literature Review and Hypotheses:**

### **2.1 Human Resource Management Practices (HRMP):**

By maintaining a healthy working environment, build a culture of team work and engagement, this will help employees to develop resilience and cope with innovative work behavior (Azevedo & Shane, 2019).

HRMP is a strategic, integrated and coherent approach that helps in employees' development and wellbeing of people working in the organization (Kaur & Kaur, 2020).

**HR practice:**

HRM practice provides a detailed job description for each position in the organization, as HR planning process includes forecasting and analyzing present labor demand and supply. Human Resource management practices dimensions that affect employee resilience and in turn both have a positive impact on innovative work behavior are shown as follow:

**-Recruitment:**

It is responsible for attracting and selecting a highly successful staff.

**-Training:**

It is focused on building performance potential at all levels in the organization

**-Reward:**

It is evaluating and encouraging valuable employees and provides them with benefits to keep them within the organization.

**-Performance Management:**

The first planning cycle in a company is to raise the performance levels of its employees through a professional HR staff.

HRM Practices are the main organizational vital activities to influence and shape employee's skills, behaviors and attitudes

to achieve organizational goals (Tzabbar et al., 2017).

HRMP's are a series of interrelated and different functions, activities and processes that are directed to develop, attract, maintain and even terminate the activities of human resource (El-Kassar et al.,2022).

### **2.2 Employee's Resilience (ER):**

Resilience is the ability to sustain performance in order to face a severe adversity, and also to cope with change (Saad & Elshaer, 2020).

Resilience is the capacity to bounce back from conflict failure, adversity, or even positive events (Raetze et al.,2021).

Previous research indicated that there could be several ways through which HRP'S could impact resilience (Salminen et al.,2019). At The extent that the employees are more resilient, he become able to respond to a new experience, innovative demand, and are emotionally capable to manage adversity (Gianesini and Brighi,2015).

Resilience consists of cognitive, emotional and behavioral components, therefore each of these components should accept as resources in innovation process within the firm (Fandiño et al.,2019).

### **2.3 Innovative Work Behaviors (IWB):**

Many studies found that HRMP's have a significant impact on innovative behavior in the organization (Easa & El Orra, 2020;

Colakoglu et al., 2021; El-Kassar et al, 2022).

Innovation in the organization has occupied a strategic position through the creation of innovative work behavior. The stages of Innovation can be grouped into two phases, Innovation adoption and Innovation creation (Meissner and Kotsemir, 2016). The phase of innovative creation refers to creation of ideas, problem solving for the process, while the adoption phase is the implementation and acquisition of Innovation.

Innovation is the process of both Implementing and generating creative ideas in certain contexts (Dunne, 2018).

Innovation comes from the inner circle organism (employees) and its ability to absorb crucial technical knowledge and combine them with the existing one is the main reason to meet the physical demands of specific innovation is the important element of resilience

## **2.4 Human Resource Management Practices and Innovative Work Behaviors:**

HRMPs are the source of Innovation work behavior (laursen and foss, 2013). A literature review demonstrates that HRMP have six common practices on the individual level associated with Innovation which is recruitment, training and development, performance appraisal, Teamwork, empowerment involvement and autonomy challenge. (Appel awn et al.,2000). Therefore, Egypt air needs HRMP to encourage creativity and innovation to gain the sustainable development and to improve

innovation work behavior effectively. (Laursen and Foss,2013). Consequently, according to the previous arguments, this paper proposes a positive relationship between the following variables:

**H1:** There is a positive significant impact of HRMP on innovative work behavior. This hypothesis is divided into the following sub-hypotheses:

**H1a:** There is a positive significant impact of recruitment on Innovative work behavior

**H1b:** There is a positive significant impact of reward on innovative work behavior.

**H1c:** There is a positive significant impact of training and development on Innovative work behavior.

**H1d:** There is a significant impact of performance on innovative work behavior.

## **2.5 Human Resource Management Practices and Employee's Resilience:**

There is an increasing interest in understanding the contribution factors to develop resilient employees and how these subsequently affect organization innovative work behavior. (Luthan and Youssef,2007).

Although the HRM Practices help in improving organizational performance, their impact on enhancing resilient employees is underexplored in organizational literature. (Avey et al,2009).



HRM Practices is unfortunately acknowledged to be important in enhancing an innovative work behavior as it can help employees to develop resilience and to cope with adversity. (Bowles and Cooper, 2012)

Previous study argued that HRM Practices that help in developed resilience may reflect employee's skills, and enhance capabilities of the organization which will improve Innovation. this paper proposes a positive relationship between the following variables:

**H2:** There is a positive significant impact of HRM Practices on employees' **hardiness**. This hypothesis is divided into the following sub-hypotheses:

**H2a:** There is a positive significant impact of recruitment on employees' hardiness.

**H2b:** There is a positive significant impact of reward on employees' hardiness.

**H2c:** There is a positive significant impact of Training on employees' hardiness.

**H2d:** There is a positive significant impact of Performance appraisal on employee resilience.

**H3:** There is a positive significant impact of HRM Practices on employees' **Resourcefulness**. This hypothesis is divided into the following sub-hypotheses:

**H3a:** There is a positive significant impact of recruitment on employees' Resourcefulness.

- H3b:** There is a positive significant impact of reward on employees' Resourcefulness.
- H3c:** There is a positive significant impact of Training on employees' Resourcefulness.
- H3d:** There is a positive significant impact of Performance appraisal on employee Resourcefulness.
- H4:** There is a positive significant impact of HRM Practices on employees' **Optimism**. This hypothesis is divided into the following sub-hypotheses:
- H4a:** There is a positive significant impact of recruitment on employees' Optimism.
- H4b:** There is a positive significant impact of reward on employees' Optimism.
- H4c:** There is a positive significant impact of Training on employees' Optimism.
- H4d:** There is a positive significant impact of Performance appraisal on employee Optimism.

## **2.6 Employee's Resilience and Innovative Work Behaviors:**

Many researchers show that resilience is uniquely supportive for many reasons, firstly it allows employees to resolve the incompatibility between current and desired states. Secondly lead to positive emotions which stimulate innovative work behavior. (Zhou and George,2007).

A resilient employee is expert in accomplishing diverse organizational goals. (coutu, 2002). When employees engaged in

innovative activities and deal with prior failed ideas, resilience may be a key that prevent sweat and tear, lost blood. (Moenkemeyer et al, 2012). Thus, the researchers hypothesize that:

**H5:** There is a positive significant impact of Employees' resilient and Innovative work behavior. this hypothesis is divided into the following sub-hypotheses:

**H5a:** There is a positive significant impact of Hardness on Innovative work behavior

**H5b:** There is a positive significant impact of Resourcefulness on Innovative work behavior

**H5c:** There is a positive significant impact of Optimism on Innovative work behavior

## **2.7 The mediation Employee's Resilience:**

Conventionally, Resilience refers to those qualities that assist the organization to cope, adapt and recover from disaster event. (Tojari et al, 2011)

There is an association between organizational resilient and Human Resource management practices, thus the study posits a mediating role of employee resilience in the relationship between HRM practices and Innovative Work behavior. (Singh, 2004)

The theoretical arguments suggest that as long as Human resource management provides employees healthy environment,

it may develop employee resilience, which subsequently may strength innovative work behavior. (Bakker, 2010). Thus, the researchers hypothesize that:

**H6:** Employee resilience mediates the relationship between HRM Practices and Innovative work behavior. This hypothesis is divided into the following sub-hypotheses:

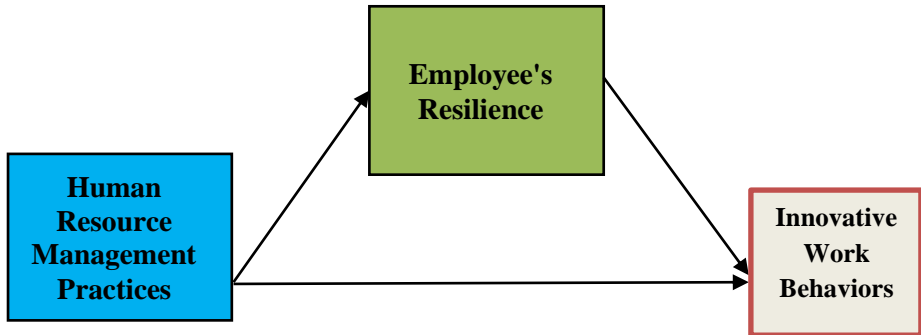
**H6a:** Employee resilience mediates the relationship between recruitment and Innovative work behavior

**H6b:** Employee resilience mediates the relationship between reward and Innovative work behavior

**H6c:** Employee resilience mediates the relationship between Training and Innovative work behavior

**H6d:** Employee resilience mediates the relationship between Performance appraisal and Innovative work behavior

Accordingly, the symbolism of the study can be clarified in the form of. 1.



**Fig. 1. Conceptual model.**

### **3. Method:**

#### **3.1 Measurement**

The study variables were assessed based on previous researcher's measurement scales. Based on this review, the survey items were adapted from existing instruments used in previous researches. The measurement item scales, used in the survey questionnaire showed a high degree of validity and reliability, Where the independent variables of HRM Practices was measured based on the development assessing scales by (Gang and Law,2009). It includes 22 statements that reflects the four dimensions of HRM Practices (recruitment-reward-training and performance appraisal). According to (Conner and Davidson,2003), employees' resilience was measured based on three dimensions (Hardiness-Resourcefulness-Optimism) included in 25 statements. Finally, Innovative work behavior

variables was measured by four Items based on assessing scale of (Radaelli et al.,2014).

### **3.2 Sample and Data Collection**

The study population consists of all employees of the holding EgyptAir companies. There are nine companies, each one is responsible for providing services in one of the air transport sectors. The companies are: (EgyptAir Airlines, EgyptAir Ground Services, EgyptAir Cargo, EgyptAir Services, EgyptAir Complementary Industries, EgyptAir Tourism and Duty Free, EgyptAir Medical Services, and EgyptAir Express). Although the study population must include all companies affiliated with the holding company for EgyptAir, four companies were randomly selected: (EgyptAir Airlines, EgyptAir Ground Services, EgyptAir Tourism and Duty Free, and EgyptAir Express). Regarding the large size of the study population and considerations of time, cost and effort, which are a constraint on research, the sampling method was relied on collect field study data. Using the Sample Size Calculator program at a confidence factor of 95% (i.e., with an error of 0.05), the sample size at a population size of (30318) is (384) singles. A total of (312) valid questionnaire was collected for statistical analysis, i.e., a response rate of (81%).

### **3.3 Method of analysis**

The researchers were relied on the partial Least Squares to modeling the structural equations to study the direct and indirect

relationship between the study variables. This Method testing a set of relationships between one or more independent and dependent variables at the same time (Hair. Jr et al.,2016).

#### **4. Analysis and Results:**

The structural equation modeling method for evaluating models includes two basic steps. The first step is to evaluate the measurement model, which is used to evaluate the validity and reliability of the study. The second step is the measurement of the structural equations model, which is used to assess the Model fit of the study and to test the hypotheses (Hair Jr et al., 2016).

#### **4.1 The first step: Evaluation of the measurement model**

It includes a test of validity and is used to indicate the extent of the validity in measuring the questionnaire's statements, what they were designed for, and to confirm that the list of statements gives the respondent the same meaning and concept that he intended. The validity of the test was relied on Content Validity: by presenting the questionnaire list in its initial form to a group of faculty members in the field of human resources management, in order to ensure its validity from a scientific point of view.

Also, a list of the survey was presented to respondents to ensure their understanding of the questionnaire statements, and the list was modified according to their observations. Convergent Validity: It refers to the extent that there is a convergent between the measurement statement that used to assess a variable or one

of its dimensions, by ensuring that there is a high correlation between the measurement statement of the intended variable to be measured by means of the Average Variance Extracted (AVE), whose value should exceed 0.50 for each dimension or variable. The results are shown in the Table (1) showed that all the values of the explained mean variance are acceptable. Discriminant Validity: It is performed by extracting the square root of the average Mean variance, which indicates the extent to which each dimension or variable is unrelated to each other. The results shown in Table (2) that all values are acceptable, as the coefficients correlation for each dimension or variable itself are greater than the coefficient correlation with the rest of variables in the other study (Hair Jr et al., 2016). Which indicate that the measurements used have a high degree of validity.

The Reliability Assessment scale is used to measure the stability of the contents variables of the study and its ability to derive the same results if the test is repeated after a specified period of time but under similar conditions. The reliability test was based on the stability of the indicator and it is calculated by means of the standard loading coefficients for each of the phrases of each variable of the study, and the results shown in Table (2) indicate that the loading coefficients for each of the terms of each variable are greater than 0.50 which are acceptable values, which indicate that the measurement used can be valid.



The internal consistency was measured by Cronbach's alpha coefficient ( $\alpha$ ) as shown in Table (1). The results of the stability test showed that all Cronbach's alpha coefficients are acceptable, as it is seen that they are greater than 0.70. This indicates a high degree of reliability on the scales used in the study, and the Composite Reliability (CR) test was conducted, which should have a value equal to or greater than 0.70. (Hair Jr et al., 2016). The results shown in Table (1) showed that all values of the (CR) are statistically VALID.

**Table 1. The Dispersion coefficient and the stability model fit and convergent validity**

Variables	Dimension	Item Code	Factor loadings	( $\alpha$ )	(CR)	(AVE)
HRMP	Recruitment	HRMP <sub>1</sub>	0.706	0.897	0.911	0.634
		HRMP <sub>2</sub>	0.784			
		HRMP <sub>3</sub>	0.863			
		HRMP <sub>4</sub>	0.741			
		HRMP <sub>5</sub>	0.703			
	Reward	HRMP <sub>6</sub>	0.743	0.831	0.906	0.773
		HRMP <sub>7</sub>	0.812			
		HRMP <sub>8</sub>	0.670			
		HRMP <sub>9</sub>	0.802			
		HRMP <sub>10</sub>	0.643			
	Training	HRMP <sub>11</sub>	0.821	0.756	0.821	0.573
		HRMP <sub>12</sub>	0.655			
		HRMP <sub>13</sub>	0.827			
		HRMP <sub>14</sub>	0.711			
		HRMP <sub>15</sub>	0.687			
		HRMP <sub>16</sub>	0.718			
	Performance appraisal	HRMP <sub>17</sub>	0.846	0.865	0.705	0.811
		HRMP <sub>18</sub>	0.780			
		HRMP <sub>19</sub>	0.689			

Variables	Dimension	Item Code	Factor loadings	( $\alpha$ )	(CR)	(AVE)			
Employees Resilience		HRMP <sub>20</sub>	0.760	0.811	0.721	0.605			
		HRMP <sub>21</sub>	0.816						
		HRMP <sub>22</sub>	0.822						
	Hardiness	ER1	0.884						
		ER2	0.881						
		ER3	0.750						
		ER4	0.732						
		ER5	0.709						
		ER6	0.702						
		ER7	0.875						
		ER8	0.843						
		ER9	0.732						
	Resourcefulness	ER10	0.875				0.721	0.819	0.727
		ER11	0.910						
		ER12	0.702						
		ER13	0.784						
		ER14	0.863						
		ER15	0.871						
		ER16	0.798						
	Optimism	ER17	0.741				0.801	0.812	0.651
		ER18	0.711						
		ER19	0.867						
		ER20	0.764						
		ER21	0.827						
		ER21	0.734						
ER22		0.911							
ER23		0.710							
ER24		0.745							
Innovative Work Behavior	IWB1	0.815	0.871	0.916	0.802				
	IWB2	0.908							
	IWB3	0.911							
	IWB4	0.885							

**Table 2. The validity of the differentiation using the matrix of correlation coefficients between the study variables**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Recruitment	0.787**							
2. Rewards	0.651**	0.819**						
3. Training	0.740**	0.757**	0.828**					
4. Performance appraisal	0.478**	0.796**	0.693**	0.812**				
5. Hardiness	0.413**	0.621**	0.584**	0.565**	0.789**			
6. Resourcefulness	0.309**	0.538**	0.651**	0.573**	0.629**	0.723**		
7. Optimism	0.434**	0.512**	0.574**	0.544**	0.745**	0.513**	0.767**	
8. Innovative work behavior	0.365**	0.354**	0.373**	0.452**	0.472**	0.495**	0.269**	0.732**

Extracted. Standardized correlations reported \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.

#### 4.2 The second step: Evaluation of the measurement model:

includes evaluating the quality of model fit, and testing the study's hypotheses, which can be explained as following:

- **Model Fit:**

According to this method, the quality of suitability of the proposed model of the study is verified, and then the relationships between the study variables are tested. The process of model fit is considered one of the critical factors in constructing the structural equation, because by applying this model it is possible to identify the extent to which the theoretical model of the study matches the results of the field study.

There are three indicators of the quality of model fit, which are the mean path coefficient, the correlation, and the variance of the inflation coefficient. The values of the mean path coefficient

and the correlation coefficient are accepted if the level of significance is less than 0.05, while the mean variance index of the inflation coefficient is accepted if its value is less than (5). The results showed that the values of the mean path coefficient Analysis, average correlation coefficient, and average variance coefficient of inflation were, respectively (0.179, 0.534, 2.254) at a level of significance less than 0.001, which indicates that the study model has an acceptable fit quality. Hence, it can be said that the overall model of the proposed framework explains the relationships between the study variables, and therefore it is efficient and reliable (Hair et al., 2019).

• **Hypotheses Testing Results.**

- The impact of human resource management practices on innovative work behavior:

Table (3) represents the results of the structural equation modeling (SEM) analysis to test the first hypothesis that shows a positive impact of human resource management practices on innovative work behaviors. The results showed that human resource management practices have a positively significant impact on Innovative work behavior. Where it reached ( $\beta = 0.567$ ) at a level of significance (0.01) as it is clear from the results that human resources management practices explain 32% of the variance found in innovative work behaviors, where the value of ( $R^2 = 0.32$ ) and thus this result supports the first hypothesis of the study and proves its persistence and validity.

Regarding the sub-hypotheses, the study found a significant impact of training ( $\beta = 0.210$ ), recruitment ( $\beta = 0.171$ ), Then the rewards ( $\beta = 0.133$ ) at level of significance (0.01). While the results of the study show no significant impact of performance appraisal on innovative work behaviors, where the value reached ( $\beta = 0.058$ ) at the level of significance (0.01). According to the response of the sample and the results of the test of the second hypothesis and its sub-hypotheses, it is possible to accept the validity of this hypothesis, which states that “there is a significant impact of human resource management practices on innovative work behaviors and reject totally the statistical alternative hypothesis of human resource management practices and partially for recruitment, Reward and training. According to the path coefficient Analysis This hypothesis was not validated for performance appraisal.

**Table 3. Testing Results of the impact of human resource management practices on innovative work behavior.**

Hypothesis	Dependent variables	Independent variables	Path coefficient analysis	Sig	R Square	Hypothesis testing results
	HRMP	IWB	0.567**	0.000	43%	
H1a	Recruitment	IWB	0.271**	0.030	45%	Supported
H1b	Reward		0.153**	0.006		Supported
H1c	Training		0.210**	0.004		Supported
H1d	Performance		0.058 <sup>ns</sup>	0.397		Not supported
<b>Extracted:</b> Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 nonsignificant (ns).						

- The impact of Human Resource Management on Employee resilience:

Table (4) represents the results of SEM analysis to test the second, third and fourth hypotheses that shows a positive impact of human resource management practices on employee resilience. The results showed that human resource management practices have a significant impact on employee resilience as it reached ( $\beta=0.776$ ) at a level of significance (0.01) as it is clear from the results that human resource management practices explain 56% of employee resilience variance, where the value of ( $R^2 = 0.56$ ). Therefore, this result supports the first hypothesis of the study and proves its validity

As for the sub-hypotheses, the study found a significant impact of training ( $\beta= 0.321$ ), recruitment ( $\beta = 0.212$ ), rewards ( $\beta=0.154$ ), then performance evaluation ( $\beta= 0.124$ ) on Hardiness at the level of significance (0.01). The study also found a significant impact of training ( $\beta = 0.273$ ), performance appraisal ( $\beta = 0.251$ ), recruitment ( $\beta =0.171$ ) then rewards ( $\beta =0.091$ ) on Resourcefulness at the level of significance (0.05). The study also found a significant impact of performance appraisal ( $\beta = 0.298$ ). Training ( $\beta = 0.194$ ), recruitment ( $\beta =0.188$ ) then rewards ( $\beta =0.144$ ) on Optimism at the level of significance (0.01). According to the response of the sample and the results of the test of the second, third and fourth hypothesis and its sub-hypotheses, it is possible to accept the validity of this hypothesis,

the validity of this hypothesis which states that “there is a significant impact of human resource management practices on employee resilience according to path coefficient

**Table 4. Testing Results of the impact of Human Resource Management Practices on Employee Resilience.**

Hypothesis	Dependent variables	Independent variables	Path coefficient analysis	Sig	R Square	Hypothesis testing results	
H2,3,4	HRMP	ER	0.776**	0.000	56%	Supported	
H2a	Recruitment	Hardiness	0.212**	0.004	61%	Supported	
H2b	Reward		0.154**	0.003		Supported	
H2c	Training		0.321**	0.002		Supported	
H2d	Performance		0.142**	0.001		Supported	
H3a	Recruitment	Resourcefulness	0.171**	0.001		Supported	
H3b	Reward		0.091**	0.030		Supported	
H3c	Training		0.273**	0.001		Supported	
H3d	Performance		0.251**	0.002		Supported	
H4a	Recruitment	Optimism	0.188**	0.001		Supported	
H4b	Reward		0.144**	0.002		Supported	
H4c	Training		0.194**	0.001		Supported	
H4d	Performance		0.298**	0.000		Supported	
Extracted: Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 nonsignificant (ns).							

- The impact of employee resilience on innovative work behavior.

Table (5) represents the results of SEM analysis of the fifth hypothesis test, which shows a positive impact of employee resilience on innovative work behavior. The results showed that employee's resilience has a positive significant impact on innovative work behavior as it reached ( $\beta = 0.534$ ) at a significance level (0.01). It is clear from the results that employees' resilience explains 33% of the variance of Innovative work behavior. The value of ( $R^2 = 0.33$ ), thus this result supports

the fifth hypothesis of the study and proves its validity. As for the sub-hypotheses, the study concluded that there is a significant effect of Resourcefulness ( $\beta = 0.279$ ). Hardiness ( $\beta= 0.225$ ). Then Optimism ( $\beta =0.152$ ) on innovative work behavior at significance level (0.01). From the above the results of the test of the fifth hypothesis and its sub-hypotheses, the validity of this hypothesis is valid, which states that “there is a significant impact of employee resilience on innovative work behavior according to path coefficient.

**Table 5. Testing Results of the Impact of Employee Resilience on Innovative work Behavior.**

Hypothesis	Dependent variables	Independent variables	Path coefficient analysis	Sig	R Square	Hypothesis testing results
H5	ER	IWB	0.534**	0.000	33%	
H5a	Hardiness	IWB	0.225**	0.006	37%	Supported
H5b	Resourcefulness		0.279**	0.003		Supported
H5c	Optimism		0.152**	0.000		Supported
Extracted: Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 nonsignificant (ns).						

- Mediating employee Resilience in the relationship between human resource management practices and innovative work behavior

Table (6) represents the results of SEM analysis of the fifth hypothesis test that shows the mediating impact of employee resilience in the relationship between human resource management practices and innovative work behavior. Whereas, the results showed that the fifth hypothesis was valid, that



employee's resilience partially mediates the relationship between the dimensions of human resource management practices represented in recruitment, rewards and training. The results also indicate that employee's resilience is completely mediates the relationship between one of the dimensions of human resource management practices represented in performance appraisal and innovative work behavior, which supports the validity of the fifth hypothesis of the study.

**Table 6. Results Mediating Employee Resilience in the Relationship between HRMP and Innovative Work Behavior**

Hypothesis	Dependent variables	Mediator variables	Independent variables	Path coefficient	Direct Path Coefficient	Total Path Coefficient	Hypotheses Testing Results
H5a	Recruitment	Employee Resilience (Hardiness + Resourcefulness (Optimism +	Innovative work behavior	0.171**	0.118**	0.289**	Supported
H5b	Reward			0.133**	0.098*	0.231*	Supported
H5c	Training			0.214**	0.236**	0.450**	Supported
H5d	Performance			0.009 <sup>ns</sup>	0.179**	0.188**	Supported

## 5. Discussion:

This part discusses the obtained results as the following: **First**, with regard to the relationship between human resource management practices and innovative work behavior, the results indicate that only three practices have positive significant impact on the innovative work behavior, namely recruitment, rewards, and training, while there is no significance impact of performance appraisal on Innovative work behavior. These results are in agreement with the results of previous studies, which aimed to study this relationship, either in whole or in part (Berber and Lekovic, 2018; Yasir and Majid, 2020). These

results are consistent with the theory of social exchange, which assumes that employees' desire to participate and demonstrate innovative work behaviors rise when they realize the existence of a beneficial exchange relationship with their organization. According to this assumption, we can conclude that as long as the awareness of employees about the availability of effective human resource management practices is high, this leads to an increase in their sense of importance, value, the meaning of work and self-esteem, which pushes employees to a high degree of commitment to innovative work behaviors. The previous result can be explained that organizations that make an effort to design effective human resource management practices in order to retain their skilled employees are most able to manage the innovative work behavior. Second, the current study found a positive significant effect of human resource management practices on employee resilience. These results are in agreement with the results of a study (Rodríguez-Sánchez, 2021; Salminen et al., 2019; Gupta & Sharma., 2018). Which emphasize the positive significant impact of human resource management practices on employee resilience. This result means that organizations develop an integrated and interconnected set of human resource management practices that lead to the development of employee skills and behaviors. This result can be explained through the social exchange theory, whenever employees realize that human resource management practices

achieve their interests and well-being, they are keen to exchange benefit psychological association with their organization and focus his efforts in improving performance (Stirpe & Sammarra., 2021). Employees are capable to sharing their ideas and experiences, in addition to employees investing their cognitive, emotional, behavioral and social resources in their interactions with their organization. **Third**, the results of the study proves that there is a positive significant impact of employee resilience on innovative work behavior, and these results are consistent with the study results (Luu., 2021; Wojtczuk-Turek and Turek., 2015), This result means that employees' skills and behaviors is an important source of innovative behavior in the organizations. Resilience gives employees the ability and experience to take risks and learn from their mistakes. Therefore, they are able to enhance their innovative behavior (Saad & (Elshaer., 2020). Employee resilience can be viewed as a source of competitive advantage (Roumpi, 2021). **Fourth**, the results indicate that employee resilience partially mediates the relationship between three dimensions of human resource management practices, namely recruitment, training, and rewards. The results also indicate that employee's resilience completely mediates the relationship between performance appraisal and their innovative work behavior based on the theory of social exchange. This result is consistent with the study (Majid., 2020 and Yasir). All of the

above prove that employees' resilience mediates the relationship between human resource management practices and innovative work behavior.

## **6. contributions:**

### **6.1 Theoretical contributions**

This study tries to contribute by filling some of the research gaps related to the relationship of human resource management practices and innovative work behavior, whether this relationship is direct or indirect through mediating employee resilience in response to the recommendations of previous studies. And try as possible to generalize the results, this can be explained in detail as follows:

**First**, this study dealt with the concept of employee resilience. For previous studies did not pay sufficient attention to the concept of employee resilience. The studies that dealt with the variable employee resilience were focused on the manufacturing sector, while limited studies were conducted in the service sector, especially airlines. **Secondly**, previous studies focused on dealing with the variables of the study as one-dimensional variable, but the current study focused on a multi-dimensional approach of the study variable in the context of service sector. In response to the recommendations of previous studies, and as an attempt to confirm the validity and reliability of the scales used to measure Dimensions of the employee resilience variable in the context of the Arab

environment and emerging economies. Also, there are no studies that have studied the mediating role of employee resilience in the relationship between the dimensions of human resource management practices and innovative work behavior within the limits of the researcher's knowledge.

**Third**, the innovative work behavior represents one of the important variables that aim to produce, promote and apply new ideas that are useful for processes, products and procedures. Therefore, the study of innovative work behaviors represents a good field for research, in addition to the scarcity of research that deals with innovative work behaviors, especially in the Arab environment. This is what was covered in that study.

## **6.2 Practical contributions**

This study examines the role of human resources management practices in stimulating innovative work behaviors by mediating role of Roupy employee resilience, in a way that provides an administrative vision for human resources managers in EgyptAir. Based on the results of the study, some recommendation can be suggested for human resources managers in EgyptAir, which can be clarified as follow:

**First**, the results of the study indicate that the dimensions of human resource management practices are a key driver for the innovative work behavior of employees. Therefore, human resource management practices must represent a basic focal point in the company's strategy aimed at developing and

developing innovative work behaviors. This result reflects the importance of providing effective human resource management practices as a basis for developing innovative work behaviors and supporting the organization competitive advantage. The human resource is one of the most important sources of achieving the company's competitive advantage because it cannot be easily imitated by competitors, in addition to the difficulty of replacing it. This is done through the following proposed mechanisms:

- In regard to recruitment, human resource managers should prepare for the hiring process. This is done by preparing specialized and psychological tests that will identify the skills and capabilities required of those who apply for vacant positions in the organization. And not only qualifications and experience. The selection process must be based on clear and specific bases, and the organization must possess sufficient information about the labor market to help it in the process of attracting.
- In regard to rewards, it should be driving the attention of employees that their outstanding effort is rewarded immediately. And managers should design an effective mechanism to motivate employees. Employees should receive some incentive and reward to support their innovative behavior.

- In regard to training and development, senior manager should be aware of the importance of identifying the training needs of employees, and working to identify these needs periodically before problems occur and not as a response to them. Attention should also be paid to the process of transferring the impact of training to the reality of actual work. And that is through holding periodic meetings to discuss the best ways to transfer knowledge, skills, and behaviors acquired from training to practical reality.
- In regard to performance appraisal, employees receive complete information regarding their performance. The direct manager discusses all aspects of the performance appraisal results with the employees. As well as defining the criteria of performance appraisal according to unified general principles that applies to all employees. This is done by enhancing employees' confidence and offers them the opportunity to express their positive opinions and suggestions. Attention should also be given to providing feedback on performance, whether positive or negative.

**Second**, the results of the study confirmed the existence of a positive impact of human resource management practices on employee resilience. This is a practical indication of the organization efforts to improve employee resilience. Thus,

researchers recommend human resource managers to increase the awareness of employees to human resource management practices. This can be achieved by attracting and selecting the best talented candidates, and by providing a clear job description, designing employee performance appraisal systems, offering rewards, and setting up a mechanism for sharing information with employees.

**Third**, the results of the study indicate that employee resilience is a ruling issue for innovative work behaviors. Therefore, it should represent a focal point in the company's efforts to improve innovative work behaviors. This is in addition to human resource management practices; Human resource managers can increase the level of employee resilience by implementing effective human resource management practices.

**Fourth**, according to the results of that study, employee resilience mediates the relationship between human resource management practices and innovative work behavior, which indicates that employee resilience, is necessary to make the impact of human resource management practices on their innovative work behavior more effective. This is an applied indication of efforts to increase innovative work behaviors. It is that the development of innovative work behavior in the organization is done through employee resilience. Therefore, human resource managers should increase employees' awareness of the importance of resilience, and human resource management



practices. The study proved that it contributes to increase the resilience of employees. In addition to increasing employees' awareness of some other practices such as employee participation and work design.

### **6.3 Limitations and future research**

Despite the theoretical and practical contributions that the current study attempted to reach, there are some limitations that must be taken into account in future studies. First, with regard to the application sector, this study was conducted in the context of airlines, therefore testing these relationships in the context of other sectors such as banking and restaurants may provide results that enrich research in this field. Second, the role of cultural differences in influencing the results of this study was not examined, which provides support for the measures used in the study if future studies take this factor into account by comparing more than one sample from different societies and environments. Third, the cross-sectional study method was followed that focuses on collecting data from the study sample once during one time period, so the recommendation for future research is to conduct longitudinal studies that depend on data collection on two different time periods to answer the research questions. Fourth, there are some other mediating variables in this relationship that future studies should focus on such as Harmonious passion, Functional resilience, psychological capital Management support and Coworker support Meaningful work.

Future studies can also focus on examining the role of some other modified variables in this relationship, such as promotion focus, prevention focus, HR system strength. Fifth: The concept of human resource management practices has expanded to include a group of other variables, for example. High-involvement, HRM practices Collaboration-based HR systems.

Finally, the role of human resource management practices can be examined on some other dependent variables such as task performance, information exchange organizational integrity.

## **7. Conclusions:**

This study shows how HRMP's stimulate employee's resilience and its subsequent innovation work behavior, so the researcher found that Employee's Resilience is also an Innovative Work Behaviors of organization.

The research highlights that employee resilient is a mediator between HRMP's and Innovative Work behavior.

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## Appendix A: Items of Questionnaire:

Cod	Items
<b>HRMP</b>	<b>Human Resource Management Practices</b> (Adapted from: Gong et al.,2009; Osman & Saifalislam, 2014 )
	<b>A. Recruitment</b>
<b>HRMP<sub>1</sub></b>	The firm practices harmonious (multiple approach) terms and conditions in the process of recruitment and selection.
<b>HRMP<sub>2</sub></b>	The firm clearly practices fair treatment in the promotion process for all employees.
<b>HRMP<sub>3</sub></b>	The firm fills vacancies from within the organization as a norm (promotion).
<b>HRMP<sub>4</sub></b>	The firm uses multiple test criteria to select the right employees
<b>HRMP<sub>5</sub></b>	The firm selects the right employees based on the multi-skills and experience of the candidates.
	<b>B. Reward</b>
<b>HRMP<sub>6</sub></b>	The reward system in the company is characterized by fairness and objectivity
<b>HRMP<sub>7</sub></b>	The reward system in purchasing is linked to work performance
<b>HRMP<sub>8</sub></b>	The reward system in the company is related to the employee's efficiency
<b>HRMP<sub>9</sub></b>	Bonuses are part of the employee compensation and remuneration system
<b>HRMP<sub>10</sub></b>	The company is interested in updating the reward system in line with environmental changes
	<b>C. Training</b>
<b>HRMP<sub>11</sub></b>	New managers in their first year of employment typically receive long hours of training in our firm.
<b>HRMP<sub>12</sub></b>	Experienced managers (i.e., those employed more than one year) typically receive long hours of training per year in our firm
<b>HRMP<sub>13</sub></b>	A large proportion of managers in our firm are qualified to perform more than one job through training or job rotation.
<b>HRMP<sub>14</sub></b>	Managers often participate in cross-functional training or job rotation in our firm.
<b>HRMP<sub>15</sub></b>	Managers in our firm often receive training outside their own functional areas.
<b>HRMP<sub>16</sub></b>	Compared to our close competitors, our firm offers more extensive training to managers.



Cod	Items
	<b>D. Performance appraisal</b>
HRMP <sub>17</sub>	Managers regularly receive formal performance appraisals in our firm
HRMP <sub>18</sub>	Managers' performance appraisals are based on objective, quantifiable results in our firm
HRMP <sub>19</sub>	Managers often receive development-focused appraisals in our firm.
HRMP <sub>20</sub>	Managers often receive appraisals for pay purposes
HRMP <sub>21</sub>	Managers often receive appraisals for promotion purposes
HRMP <sub>22</sub>	Compared to our close competitors, our firm has a better-designed performance appraisal system
<b>ER</b>	<b>Employee's Resilience</b> (adapted from; Connor & Davidson, 2003)
	<b>A. Hardiness</b>
ER <sub>1</sub>	Able to adapt to change
ER <sub>2</sub>	Close and secure relationships
ER <sub>3</sub>	Sometimes fate or God can help
ER <sub>4</sub>	Can deal with whatever comes
ER <sub>5</sub>	Past success gives confidence for new challenge
ER <sub>6</sub>	See the humorous side of things
ER <sub>7</sub>	Coping with stress strengthens
ER <sub>8</sub>	Tend to bounce back after illness or hardship
ER <sub>9</sub>	Things happen for a reason
	<b>B. Resourcefulness</b>
ER <sub>10</sub>	Best effort no matter what
ER <sub>11</sub>	You can achieve your goals
ER <sub>12</sub>	When things look hopeless, I don't give up
ER <sub>13</sub>	Know where to turn for help
ER <sub>14</sub>	Under pressure, focus and think clearly
ER <sub>15</sub>	Prefer to take the lead in problem solving
ER <sub>16</sub>	Not easily discouraged by failure
	<b>C. Optimism</b>
ER <sub>17</sub>	Think of self as strong person
ER <sub>18</sub>	Make unpopular or r difficult decisions
ER <sub>19</sub>	Can handle unpleasant feelings
ER <sub>20</sub>	Have to act on a hunch

The Mediating Role of Employee Resilience on The Relationship Between ...

*Dr. Reem Ahmed Abou Al Nile & Dr. Hany Mohamed Galal*

<b>Cod</b>	<b>Items</b>
<b>ER<sub>21</sub></b>	Strong sense of purpose
<b>ER<sub>22</sub></b>	In control of your life
<b>ER<sub>23</sub></b>	I like challenges
<b>ER<sub>24</sub></b>	You work to attain your goals
<b>ER<sub>25</sub></b>	Pride in your achievements
<b>IWB</b>	<b>Innovative Work Behavior (IWB)</b> (adapted from; Radaelli et al.,2014)
<b>IWB<sub>1</sub></b>	I usually introduce small innovations into my practice
<b>IWB<sub>2</sub></b>	I often develop new procedures to improve my everyday practice.
<b>IWB<sub>3</sub></b>	I often succeed in transforming my innovative ideas into practical solutions
<b>IWB<sub>4</sub></b>	I often develop new solutions to solve problems.