

## Procurement Practices, a Prerequisite for Disaster Preparedness

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**To Link this Article:** <http://dx.doi.org/10.6007/IJARBSS/v8-i6/4231>

DOI:10.6007/IJARBSS/v8-i6/4231

**Published Date:** 28 June 2018

### Abstract

This study tried to explore the impact of preparedness on disasters in the health care of Pakistan. The purpose of this study is to check the factors of Disaster preparedness. Data is analyzed through Statistical Package for the Social Sciences (SPSS) version 21. The respondents of this research are doctors, nurses and other staff working in hospitals in Faisalabad city. The sample size of this research is 125. The hypothesis generated for the study was tested at 0.05. Data is analyzed through descriptive and inferential tests on the responses gathered. The results of this study showed that there is a significant relationship between Disaster preparedness and Procurement Practices. The results also signify that Policy Innovation mediates the relationship between Disaster Preparedness and Procurement Practices. This research also presents Future Implications, Recommendations & Suggestions and also Conclusion.

**Keywords:** Disaster Preparedness, Procurement Practices, Policy Innovation

**Introduction****Background**

According to the UN report over the past two decades disasters have doubled from about 200 to over 400 per year. Most disasters have been climate-related (United Nations, 2008). In the past two centuries, almost 1.9 million deaths have occurred in Bangladesh due to the cyclone (Thomalla & Schmuck, 2004). Disasters are common in Bangladesh including cyclone, earthquake, drought, storm surge, floods, tornado and arsenic contamination of groundwater (Khan, 2008). Within the duration of two months in 2004, four hurricanes have occurred in Florida. About 70 people died and almost 2.3 million bears break down of power during Storm, and damage of total property was expected at \$25 billion (Kapucu, 2008). "Hyogo Framework for Action" was designed in 2005 to reduce the risk of disasters worldwide. 168 countries in the world have accepted this framework. Sendai Framework was adopted by the worldwide in March 2015 for reducing the risk of disasters 2015-2030. The main point of this framework is that risk of disaster management emphasis as against to management of disasters. Moreover, the range has been broadened significantly by disaster risk reduction program with the emphasis on both man-made and natural hazards and also biological hazards, technological, environmental and risks (PPAF, 2015).

Pakistan is located in a region that there are many disasters occur such as floods, earthquakes, and droughts. Earthquake in 2005 in the northern area of the country with a magnitude of 7.6 killed more than 80,000 people and 3.5 million homeless. According to Pakistan Poverty Alleviation Fund (PPAF) in Pakistan to start a disaster reduction program by "Agha Khan Development Network" given the name "Prevention Mitigation Preparedness" (PMP) in 1999 in northern Areas like Gilgit-Baltistan. So far setting up of National Disaster Management Authority various points of reference have been accomplished including: publishing National Disaster Risk Management (NDRM) Framework, formulating legislation for institutional setup, provincial structure of disaster management, introducing a new Disaster Response System, establishing the Institute of Disaster Management as the leading institute of training and capacity building program for supervision of manmade and natural hazards occur in the state, and a mindful provision to encouraging Disaster Risk Management in the state (PPAF, 2015).

**Problem Statement**

Pakistan is located in the most susceptible area, where natural disasters and climate change occur due to deforestation, melting glaciers and its various scope of territory widening from the Arabian Sea to the Himalayan Mountains. Pakistan is vulnerable to wide-ranging hazards like cyclones, earthquakes, droughts and affected by floods nearly every year due to monsoon rains. There are always appears a possibility of the reappearance of identified hazards resulting in the huge disaster which warrants the need for possible planning for moderation of miseries of the potentially at-risk population ( Sandhu, 2013). Moreover, Disasters delay sustainable development (ERRA, 2006). Emergency managers acknowledge that information flow is imperious to the success of preparedness. Though, lack of information of the receiver's access, awareness, interpretation, knowledge, and involvement indicates a failure of the system ( Groves, 2013).

**Research Questions**

These questions can be raised to follow the problem statement.

- 1-What is the impact of Disaster Preparedness and procurement practices in the healthcare of Pakistan?
- 2-What is the impact of Disaster Preparedness and policy innovation in the healthcare of Pakistan?
- 3- How the impacts of preparedness on procurement in the healthcare of Pakistan?

### **Objective of the Study**

The objective of this research can be raised to follow the research question.

- To explore the relationship between disaster preparedness and procurement practices.
- To explore the relationship between disaster preparedness and policy innovation.
- To examine how the impact of preparedness on procurement.

### **Purpose of the Study**

Globally Pakistan is one of the most disaster-affected states. The economy of the nation and sustainable growth adversely affected due to natural disasters. Therefore mitigation measures preparedness for the disasters is vital for the development of Pakistan. The motivation behind this examination is to investigate the current state of calamity readiness in Pakistan with specific thoughtfulness regarding more typical and harmful hazards like earthquake, flood, and cyclone.

### **Justification of the Study**

This study looked at disaster preparedness of different hospitals in Faisalabad. The management structure was same all over the hospitals of Pakistan, that's why I have collected the data of only one city of Pakistan. In Pakistan National Disaster Management Authority identified health care system for disasters. On electronic databases, there was lack of research available about disaster preparedness in Pakistan. This study contributes to the information base on the hospitals in Faisalabad. It is expected that results of this research will use the hospitals' authorities and the Pakistan government. In terms of disaster preparedness, it will also help out to the better understanding of the process in the health sector of Pakistan in order to build up the capabilities and capacities of the hospitals in Pakistan.

### **Scope of the Study**

In this research, the questionnaire is designed to collect data from employees working in hospitals. I have collected data from doctors, nurses and other staff of hospitals in Faisalabad. The structure of hospitals all over Pakistan is same, that's why I have only collected the data from different hospitals in Faisalabad.

### **Literature Review**

#### **Disaster Preparedness**

In the perspective of disaster preparedness model of social cognitive demonstrated that people's motivation to prepare for disasters is a function of the cognitive and affective reactions to floods, earthquakes, cyclones and other geologic processes ( Espina & Teng-Calleja, 2015). Natural hazards can badly effect on all types of businesses. It impacts directly including human losses and damage to equipment's, buildings, vehicles, and all type of inventories. Its effects also indirectly including off-site business interruption reduce the property prices and impact on the stock market as well as features of environmental and

sociological effects (Asgary, Anjum, & Nizami, 2012). Pakistan has experienced many disasters over the last few decades. In the earthquake of 2005, there are almost 80,000 people died, 69,000 injured and millions homeless (Halvorson & Hamilton, 2010). Another massive disaster experienced by Pakistan is the floods in 2010 (Deen, 2015). The floods in Pakistan affected more than 20 million People. There are large numbers of people died also serious loss of property esteemed at an expected \$1.3 billion in floods of 1950 (Ali, 2013), 1992 (Hashmi, Siddiqui, Ghumman, Kamal, & Mughal, 2011) and 1998 (Memon & Sharjeel, 2015), and the other disasters which Pakistan faced are cyclones, landslides, and drought (Sardar, Javed, & Amir-ud-Din, 2016). At the government level after the earthquake of 2005 Pakistan established an organization National Disaster Management Authority (NDMA) to start a disaster management program. It works with government, United Nation, military, and donors to mobilize, receive, and arrange relief goods. These activities are also being organized by provincial level and district-level governments. But two year earlier in 2003 the officials of Pakistan government, with the support from United Nation Development Program, introduced a plan which name "Strengthening Pakistan's Disaster Management Capacities at National, Provincial and District Level", which at the appropriate time was to be the foundation for the formation of National Disaster Management Commission and Authority (ERRA, 2006). Primary focal point of Disaster Management usually more effective and suitable answers to the coming occasion or the arrangement of rapid services to re-establish fundamental services afterward the disasters (ERRA, 2006). There is a number of factors that increase the disasters in Pakistan. These are including poor structure of buildings, lack of awareness, poor early warning system and limited coordination between various government disaster response organizations. The disaster preparedness phase includes the activities to develop operational skills and the effective response to a disaster, such as mitigation activity, disaster planning, education and training, and exercises.

### **Policy Innovation**

National Disaster Risk Reduction Policy offers an overall managing structure for addressing the high levels of disaster risk invading Pakistani Society. It covers both natural and man-made disasters. This policy pursues to promote importance measures to improve already remaining vulnerability to disasters, and equally vital measures to confirm future development programs support resilience (NDMA, 2013). Earth Reconstruction and Rehabilitation Authority (ERRA) supported by United Nations Development Program have arranged "Risk Management Plans" over a participating procedure for disastrous areas. Plans are wide-ranging and fully cover the variety of issues which are including hazard mitigation, preparedness of nation and prevention of disaster (ERRA, 2006). Be that as it may, the Plans must be supportive. Mostly, in this case, the plans will never be fulfilled because of add to office racks. There is another problem of proprietorship and limitation of funds for operationalizing. The undertaking of Disaster Risk Management will help the local government in improving organized reason for operationalizing the plans of District Management. (ERRA, 2006).

### **Procurement Practices**

In Pakistan, Disaster management turns around disaster-affected areas with the main focus on rescue and relief (Sayed & Gonzalez, 2014). After every disaster, the government expends resources at rehabilitation, rescue, and relief. After the disasters recovery requires strong organizations, which can be attained either through increasing the capacity of



Bachelor	103	82.4
Master	7	5.6
MS/M.Phil	2	1.6

The Sample size of this research is 140 out of which 125 is considered, doctors and other staff in different divisions and offices of government hospitals in Faisalabad. Percentage of 22.4 were between 20 and 25 years, 32 percent were between 26 and 30 years, 16.8 percent were 31 and 35 years, 12.0 percent were between 36 and 40 years, percentage of 6.4 was between 41 and 45 years, percentage of 4.0 were between 46 and 50 years also 51 and 55 years and percentage of 2.4 were between 55 and 60 years old. 10.4 percent of the respondents were intermediate, 82.4 percent Bachelor, 5.6 percent Master, and 1.6 percent MS/M.Phil.

### Reliability Test and Correlations

	A	Disaster Preparedness	Policy Innovation	Procurement Practices
Disaster Preparedness	.704	<b>1</b>		
Policy Innovation	.705	.390**	<b>1</b>	
Procurement Practices	.703	.298**	.180*	<b>1</b>

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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The above Table shows Cronbach's Alpha ( $\alpha$ ) value of Disaster Preparedness, Policy Innovation, and Procurement Practices is 0.704, 0.705 and 0.703 respectively. The values of Cronbach's Alpha shows the above Table is greater than 0.7, which determines the reliability of data. It means the results and research instrument are reliable.

Between all the variables in order to check the relationship in this model, the correlation analysis was used. The relationship between independent and dependent variables to the test value of the correlation positive is at the level 0.01 and 0.05. This table shows the strong relationship between Disaster Preparedness, Procurement Practices and Policy Innovation with the correlation of .704, 0.705, .655, and .703.

### Regression Model

#### Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.595 <sup>a</sup>	.354	.337	.34107	1.720

a. Predictors: (Constant), Disaster Preparedness

b. Dependent Variable: Procurement Practices

#### ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.384	1	2.687	21.002	.000 <sup>b</sup>
	Residual	13.494	123	.114		

Total 20.878 124  
 a. Dependent Variable: Procurement Practices  
 b. Predictors: (Constant), Disaster Preparedness

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	1.101	.519		2.122	.036
	Disaster Preparedness	.488	.141	.298	3.464	.001

a. Dependent Variable: Procurement Practices

The table of regression shows the result of independent variables and dependent variable which is procurement practices. Table, R square depicts Disaster Preparedness has 35.4% impact on Procurement Practices, which shows that a significant impact of Disaster Preparedness on Procurement Practices. To check the nature of correlation among the variables Durbin-Watson is calculated, which describes either correlation is significant, insignificant or zero. The value of Durbin Watson is 1.72 is less than 2, it depicts that there is significant positive correlation Disaster Preparedness and Procurement Practices.

$Y = b_0 + bX$

Procurement Practices = 1.101 + .298 (Disaster Preparedness)

This equation shows that one unit change Disaster Preparedness is increased the 1.682 units of Procurement Practices.

Mediation Analysis

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3903	.1523	.4460	22.0988	1.0000	123.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.8446	.4073	2.0739	.0402	.0385	1.6508
Disaster	.5197	.1105	4.7009	.0000	.3008	.7385

\*\*\*\*\*

Outcome: Procurem

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3061	.0937	.7259	6.3064	2.0000	122.0000	.0025

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.0229	.5286	1.9352	.0553	-.0235	2.0692
Policy_l	.0924	.1150	.8036	.4232	-.1353	.3202
Disaster	.4398	.1532	2.8714	.0048	.1366	.7431

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

Outcome: Procurement

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2982	.0889	.7238	12.0017	1.0000	123.0000	.0007

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.1009	.5188	2.1220	.0358	.0740	2.1279
Disaster	.4879	.1408	3.4643	.0007	.2091	.7666

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS \*\*\*\*\*

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.4879	.1408	3.4643	.0007	.2091	.7666

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.4398	.1532	2.8714	.0048	.1366	.7431

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
Policy_I	.0480	-.0587	.1943

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
Policy_I	.0541	-.0670	.2163

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
Policy_I	.0294	-.0360	.1143

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
Policy_I	.0985	-.1282	.5215

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
Policy_I	.1092	-.1153	1.0648

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI
Policy_I	.0276	-.0028	.0827

Normal theory tests for indirect effect

Effect	se	Z	p
.0480	.0620	.7752	.4382

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS\*\*\*\*\*

Number of bootstrap samples for bias-corrected bootstrap confidence intervals: 5000

Level of confidence for all confidence intervals in output: 95.00

**Recommendations & Suggestions**

Lack of policies and procedures for disaster preparedness has even worsened the prevailing conditions. Although natural disasters are inevitable, imperfect policies and actions turn those calamities into human disasters and people have to face the brunt of failed policy. The government's response is insufficient and mainly unable to address the importance of the condition. After the Disasters, Pakistan has to now focus on the recovery process. The reconstruction of the entire infrastructure including the irrigation systems, communication channels, hospitals and institutes in addition to the accommodation of displaced persons is the main challenge ahead. The whole process needs the wide-ranging planning and policy measures, which apparently have numerous missing links.

**Conclusions**

Research on preparedness is very significant in mitigating the health effects of disasters and improving the effectiveness of response activities and has important benefits for dealing with future calamities. Natural hazards reduce sustainable development in the country. Flood, earthquake, hurricane, and cyclone are common and harmful to all natural hazards in the state. Despite several hurdles, development is accomplished in the preparedness. Though, betterments are still necessary for wide-ranging disaster preparedness.

**Future Implications**

Researchers should increase the number of surveys that have an appropriate sampling size to allow study comparative to different population divisions, such as demographic and sociographic differences, and other relative factors. Surveys should also focus on specific audience segments so that movements and other management initiatives can be enhanced fit the requirements of different people.

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