Revolutionizing Crisis Response: Cutting-Edge Strategies for Building Organizational Resilience

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Article

Revolutionizing Crisis Response: Cutting-Edge Strategies for Building Organizational Resilience

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Abstract: Crisis management is essential for businesses to effectively respond to, recover from, and mitigate the effects of unexpected disruptions. This study investigates factors influencing organizational resilience in Himachal Pradesh's pharmaceutical sector (India), focusing on crisis management techniques. The primary goal is to identify key components that support resilience in this industry. Data were collected using structured online and offline questionnaires, yielding 483 valid responses from a sample size of 500 across six pharmaceutical companies. Factor analysis with SPSS software identified three crucial components: "Innovations and Employee Engagement," "Organizational Resources," and "Organizational Culture and Values." Innovations and Employee Engagement" highlight the importance of fostering a creative environment where employees feel empowered to take initiative during crises. "Organizational Resources" underscore the critical role of adequate infrastructure, financial resources, and technological advancements in building resilience. "Organizational Culture and Values" emphasize the importance of shared standards, values, and beliefs in promoting cohesion and unity during adversity. By prioritizing these elements, pharmaceutical companies in Himachal Pradesh can enhance their crisis response capabilities and foster a resilient organizational culture. Implementing these insights through targeted strategies can ensure long-term viability and improve preparedness for future crises.

Keywords: innovations and employee engagement; organizational resources; organizational culture and values; organizational resilience; crisis management; pharmaceutical industries

Introduction

Organizations are by nature itself susceptible to unforeseen circumstances and uncertainty. Conversely, uncertainties can present possibilities as well as threats [1,2]. Right now, the primary concern is how companies handle uncertainty and unforeseen circumstances, as well as how they accept and mitigate any negative effects [3,4]. Any undesirable, unexpected, unforeseen, and nearly uncontrollable circumstance that causes widespread skepticism and doubt is referred to as a "crisis" [5,6]. Holling (1973) initially defined resilience as the capacity to withstand and adapt to changes, as well as the capacity to restore a system's upset equilibrium in the context of ecology and environment [7]. The idea was eventually transferred to the social sciences, especially strategic management, operations management, and economics, after initially appearing in the engineering, applied sciences, and natural sciences [2].

In a global crisis, organizational resilience (which is measured by how quickly a firm returns to a dynamic equilibrium after a shock and after the shocks are absorbed) and crisis management are essential [8–12]. The COVID-19 epidemic had a profound effect on people's lives in almost every way, including businesses, the job market, and individuals [13–17]. Organizational resilience is the best conceptual term to explain why certain companies were able to respond quickly to it, handle it successfully, and go on to develop innovative, long-lasting business practices [18]. In order to respond to a crisis and recover swiftly, an organization needs to be resilient [19,20]. McManus et al. (2008) stated that for an organization to be resilient, "adaptive ability, vulnerability analysis, and situational awareness" are required [21].

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Although many research on organizational resilience have been done in the past, but, the majority of them have certain shortcomings [22–27]. The body of knowledge about organizational resilience and crisis management is constantly growing in a number of fields, including - tourism [28], small and medium-sized enterprises [13–17], artificial intelligence and machine learning [29], healthcare and pharmaceuticals [2,30–33], energy [34], and digital transformation [35] etc. Crisis management is a defined proactive process with three stages: before, during, and after a crisis [36,37]. The goal of crisis management is to prevent or minimize negative effects on the company, industry, and partners [38].

While facing obstacles like regulatory compliance, product recalls, natural disasters, and supply chain disruptions, Himachal Pradesh, a significant region in India, is the location to a major pharmaceutical industry. To ensure the sustainability and success of pharmaceutical companies, in the region strong crisis management strategies and organizational resilience is required. The pharmaceutical industry in Himachal Pradesh is experiencing rapid growth, highlighting the importance of crisis preparedness and organizational resilience [39]. This study aims to explore how pharmaceutical companies in the region identify, prevent, and respond to crises, and the factors contributing to their resilience in the face of adversity, thereby improving industry-wide resilience.

Literature Review

Based on the idea that a resilient organization must have certain characteristics, the organizational resilience attribute approach finds and develops these attributes in order for the organization to endure [12,26,40]. The attributes that are most commonly discussed about organizations include being able to recognize making sense of things, having genuine awareness, having learned from past disasters, tackling resources with flexibility, having trained functioning skills, finding other ways to solve problems, and having communication and leadership abilities [23,24,26,41–44].

According to the organizational resilience process concept, building and acquiring incremental capability inside an organization is a continual process that involves anticipating, adapting, and learning [45]. According to the process approach, identifying a crisis early on can help an organization be better prepared for one by lowering its reliance on the resources that will be most affected [18]. The organizational resilience multi-level approach is composed of a constellation of different level characteristics and procedures; in other words, organizational resilience is built at multiple levels simultaneously and independently [46]. The reason for developing this approach is that group and organizational activities foster the emergence of resilience at both the individual and collective levels [47].

With economic globalization, organizations face an unprecedented degree of unpredictability where unexpected events happen frequently [48–50]. A multitude of circumstances, such as natural disasters, pandemic diseases, terrorist attacks, political unrest, and economic instability, can have an unforeseen impact on an organization's competitiveness and resilience [20]. There are instances when catastrophes present opportunities for corporate growth [51], like making fresh business contacts [52]. In contrast, crises tend to take organizations by surprise, causing members to feel unsure and possibly even leading to the collapse of the organization [26,49,53,54]. If businesses can identify the early warning signals of a crisis, they can prevent disasters and survive without suffering significant financial losses [55,56]. Crisis management encompasses "forecast, prevention and preparedness, property determination and control, recovery, and learning" among other activities [56–58]. Planning, social media, information technology, experience, leadership, and governance are important factors that affect the crisis management process [59–61].

Handling these crises forces leaders to think about how companies might profit from the unpredictability of the environment, support sustainable growth, and gain a competitive advantage [62]. Organizational resilience is a term used to characterize how companies thrive and endure under tumultuous or difficult circumstances [27]. Organizational resilience gives companies the ability to maintain a sustained competitive advantage by extending their lifespan and enhancing their capacity to adapt and overcome external shocks [60,63,64]. This means that companies need to concentrate

 doi:10.20944/preprints202409.1503.v

more than ever on building organizational resilience. The key to understanding how companies could achieve a sustained competitive advantage is to delve deeper into the underlying elements that determine organizational resilience [65].

Organizational resilience has gained more attention in academic and theoretical areas during the past 10 years [24,66–68]. Numerous studies have been conducted in a variety of fields, including like psychology, engineering, ecology, management, etc., and the body of related literature is expanding annually [45,69–74]. Both an input and a result of organizational learning is organizational resilience [10].The primary factors that determine organizational resilience include "organizational assets, organizational abilities, interpersonal relationships, communication within the organization, social capital, strategic planning, learning within the organization, and work passion [54,75]. Training is an essential part in increasing organizational lifespan. In the end, organizational learning increases the resilience of the organization [76]. Possessing a greater capacity for learning is beneficial for quickening an organization's crisis recovery [77]. The topic of resilience in an organization is complex, multifaceted, and involves many levels [78].

The objective aim to understand the factors responsible for the development of organizational resilience in pharmaceutical industry in Himachal Pradesh.

Research Methodology

Primary data from employees working in the 6 pharmaceutical industries (“Corona Pharma, Leeford Healthcare Ltd, Meridian Medicare, Theon Pharmaceutical Pvt. Ltd, Ultra Drugs Pvt Ltd Unit 1 and Ultra Drugs Pvt. Ltd Unit 2”) that are chosen randomly from the list of industries in Himachal Pradesh. The structured questioner is used both online and offline modes to collect the data from employees of 6 industries with the help of convenience sampling. The secondary data is used to frame the questioner. For the study sample size of 500 is taken and 483 valid responses were received. Factor analysis on SPSS software is used to fulfil the objective.

Results and Discussions

1.1. Frequency Distribution

Table 1 illustrates the frequency distribution details of the 483 valid responses from the employees working in the pharmaceutical industries. Among 483 respondents 56.31% were male, 40.37% were females and remaining 3.31% were others. Between 25-35 age gap there was maximum 38.72% respondents followed by 26.92% for age gap 35-45 years, 17.39% for age gap 18-25 years, 9.11% for age gap 45-55 years and 7.87% for above 55 years. Among 483 respondents 46.17% were graduate, 26.92% were post graduate, 12.42% were intermediate, 11.39% were Ph.D. and remining 3.11 % lies in category of others.

Table 1. Frequency Distribution.

Variables	Frequency	Percentage
Gender		
Male	272	56.31
Female	195	40.37
Others	16	3.31
Age		
18-25	84	17.39
25-35	187	38.72
35-45	130	26.92
45-55	44	9.11
Above 55	38	7.87
Qualification		
Intermediate	60	12.42
Graduate	223	46.17
Postgraduate	130	26.92

 doi:10.20944/preprints202409.1503.v

Ph.D.	55	11.39
Others	15	3.11

4.2. Factor Analysis

In order to identify the factors that affect the organisational resilience Factor analysis was carried out. Factor analysis facilitated in reduction of data and came to identify final three factors that affects the organisational resilience.

Table 2. KMO and Bartlett's Test.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.975
Bartlett's Test of Sphericity	Approx. Chi-Square	5838.088
	df	435
	Sig.	0.000

Table 2 reveals a very high KMO measure of 0.975 for 30 items, indicating that the sample size was sufficient to carry out the factor reduction approach. Bartlett's test of sphericity has a significance value of less than 0.05, indicating that there is an adequate sample size in relation to the number of items in the scale under test for principal component analysis.

Table 3. Communalities.

Communalities		
	Initial	Extraction
The organization encourages us to be members of professional bodies and social-networking web sites.	1.000	0.594
Professional development is encouraged by the organization through training, workshops,seminars etc.	1.000	0.606
Outhouse trainers and field experts are invited for learning and development activities.	1.000	0.602
Training and Development programs are frequently conducted.	1.000	0.591
The organization has a good knowledge management system.The organization has a good knowledge management system.	1.000	0.626
Efforts are made by the organization to retain its skilled and best employees.	1.000	0.579
Organization has strong IT facilities to store and process information.	1.000	0.618
Retired employees are getting contract possibilities because of their experience.	1.000	0.701
Workers have easy access to the information they need to complete their job.	1.000	0.504
Good performance is recognized and supported by the superior.	1.000	0.638
The organization promote socialization and interaction.	1.000	0.560
Innovation and ideas are evaluated and implemented.	1.000	0.626
The organization monitors the changes in the environment and effectively adapt to the situation.	1.000	0.458
Employee are given the freedom to take initiative with minimum supervision.	1.000	0.496
Organization is capable to adapt and implement new concepts.	1.000	0.661
Organization is at the forefront of innovation.	1.000	0.683
Threats and weakness are transformed into opportunities and strengths.	1.000	0.615
People receive finances and other resources to support their learning and are rewarded for learning.	1.000	0.611
People see challenges at work as opportunities to grow.	1.000	0.639
The managers frequently involve their staff members in crucial decision-making processes.	1.000	0.593
Employee learning is viewed more as an expense than an investment.	1.000	0.499
Employee capacity for learning is considered significant in the organization.	1.000	0.593
Every employee tends to be aware of the goals of the organization.	1.000	0.421
Each department is well aware about their roles in achieving organizational goals.	1.000	0.708
All departments are interconnected and function as a unit in a coordinated manners.	1.000	0.718
The organization adopts new practices and approaches while also keep an eye on the strategies of other organization.	1.000	0.636
Experiences and suggestions offered by outside sources is referred as effective tool for organizational learning.	1.000	0.578
Organizational culture encourages employees to freely express their opinion and suggestion.	1.000	0.670
Employees are given the opportunity to discuss innovative ideas and plans.	1.000	0.681

 doi:10.20944/preprints202409.1503.v

Maximum probability was employed as the extraction approach in the current investigation since it operates under the premise that the number of components should be known before to the extraction procedure. The thirty variables that were used to quantify organisational resilience were cut down to twenty-nine, and one of the variables was improperly loaded because of a lower factor loading score (0.205). Item17 related to the organization's resource utilisation was eliminated. Extraction values of statement 13, 14, 22 and 24 are slightly less than 0.5 hence were not removed. The communalities and extracted values upon rotation are displayed in the Table 4.

Table 4. Rotated Component Matrix.

Items	Components		
	1	2	3
Innovations and Employee Engagement			
1. Good performance is recognized and supported by the superior.	**0.593**	-	-
2. Innovation and ideas are evaluated and implemented.	**0.597**	-	-
3. The organization monitors the changes in the environment and effectively adapt to the situation.	**0.649**	-	-
4. Employees are given the freedom to take initiative with minimum supervision.	**0.568**	-	-
5. Organization is capable to adapt and implement new concepts.	**0.575**	-	-
6. Organization is at the forefront of innovation.	**0.606**	-	-
7. Threats and weakness are transformed into opportunities and strengths.	**0.576**	-	-
8. People receive finances and other resources to support their learning and are rewarded for learning.	**0.606**	-	-
9. People see challenges at work as opportunities to grow.	**0.572**	-	-
10. All departments are interconnected and function as a unit in a coordinated manners.	0.**624**	-	-
11. The organization adopts new practices and approaches while also keep an eye on the strategies of other organization.	**0.575**	-	-
12. Experiences and suggestions offered by outside sources is referred as effective tool for organizational learning.	**0.580**	-	-
13. Organizational culture encourages employees to freely express their opinion and suggestion.	**0.624**	-	-
14. Employees are given the opportunity to discuss innovative ideas and plans.	**0.527**	-	-
Organisational Resources			
1. Professional development is encouraged by the organization through training, workshops, seminars etc.	-	**0.523**	-
2. Training and Development programs are frequently conducted.	-	**0.549**	-
3. The organization has a good knowledge management system. The organization has a good knowledge management system.	-	**0.587**	-
4. Efforts are made by the organization to retain its skilled and best employees.	-	**0.525**	-
5. Organization has strong IT facilities to store and process information.	-	**0.465**	-
6. The managers frequently involve their staff members in crucial decision-making processes.	-	0.**499**	-
7. Employee learning is viewed more as an expense than an investment.	-	**0.527**	-
8. Employee capacity for learning is considered significant in the organization.	-	**0.584**	-
9. Every employee tends to be aware of the goals of the organization.	-	**0.647**	-
10. Each department is well aware about their roles in achieving organizational goals.	-	**0.589**	-
Organisation Culture and Values			
1. The organization encourages us to be members of professional bodies and social-networking web sites.	-	-	**0.571**
2. Outhouse trainers and field experts are invited for learning and development activities.	-	-	**0.570**
3. Retired employees are getting contract possibilities because of their experience.	-	-	**0.799**
4. Workers have easy access to the information they need to complete their job.	-	-	**0.472**
5. The organization promotes socialization and interaction.	-	-	**0.519**

Factor 1 is loading with 14 statements are related to the innovations adopted by the organizations and the engagement of employees. Hence the factor has been named as “Innovations

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and Employee Engagement". Factor 2 is loading with 10 statements related to the resources in the organizations henceforth the factor was named as "Organisational Resources". Factor 3 comprises of the five statements representing the culture of the organization hence was named as "Organization Culture and Values".

Conclusion

Finally, the research findings highlight how crucial organizational resilience techniques are to improving crisis response in Himachal Pradesh's pharmaceutical industries. "Innovations and Employee Engagement," "Organizational Resources," and "Organizational Culture and Values" were found to be three important factors that significantly contribute to organizational resilience through factor analysis utilizing SPSS software.

- "Innovations and Employee Engagement" is significant because it highlights how important it is to cultivate a culture of continuous improvement and include employees actively in crisis preparedness and response operations.
- This component emphasizes how important it is for workers to be creative, flexible, and committed in order to overcome obstacles.
- In addition, the significance of "Organizational Resources" highlights the necessity of having sufficient technology, financial resources, and infrastructure to support programs aimed at enhancing resilience.
- Investing in these areas can reduce operational disruptions and improve the organization's capacity to endure and recover from crises. Last but not least, the importance of "Organizational Culture and Values" highlights how common norms, values, and ethical standards affect organizational resilience.
- A robust culture based on openness, mutual respect, and common objectives promotes harmony and solidarity in tumultuous times, empowering the company to deploy assets and anticipate problems before they arise.
- Pharmaceutical businesses in Himachal Pradesh can enhance their crisis response capabilities and foster an organizational attitude that is resilient by acknowledging and giving priority to these issues.
- In addition to improving crisis readiness, putting specific strategies into place to boost innovation, resource management, and organizational culture will also support long-term sustainability and competitiveness in the ever-changing pharmaceutical industry.

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