International Journal of Recent Innovations in Academic Research
E-ISSN: 2635-3040; P-ISSN: 2659-1561
Homepage: https://www.ijriar.com/
Volume-9, Issue-2, April-June-2025: 257-264

Research Article

Strategic Readiness and Performance of Disaster Response Agencies in Baringo County, Kenya

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Received: April 18, 2025 **Accepted:** May 09, 2025 **Published:** May 15, 2025

Abstract
Disaster response in Kenya is often inadequate and characterized by a failure to act on early warnings; the government disaster response has been criticized as neither effective nor adequate. The way in which a company responds to a crisis can be critical to its survival and long-term success. Strategic readiness may provide better crisis response if well-articulated in the organization. Therefore, the main objective of the study was to establish the influence of human capital readiness on performance of disaster response agencies in Baringo County, Kenya. The study adopted the descriptive survey and targeted 13 disaster response agencies which focused on humanitarian relief in Baringo County, Kenya. The unit of observation was 5 managers from each of the 13 disaster response agencies resulting to a total of 65 respondents. The unit of observation was the managers of various departments. The study used the census design for the organizations and will select the management using purposive sampling. Data was collected through questionnaires. Both descriptive and inferential statistical methods were used to analyse the data which was then presented in tables and discussed. A pilot study was carried out in Samburu County, to evaluate questionnaire validity and reliability with a target of 7 respondents. To test for the reliability of the instrument, Cronbach's alpha was used. From the results found, the overall Cronbach's alpha for all the items were above 0.7 implying that the internal consistency of the research instrument was excellent and thus reliable. Data was both quantitatively and qualitatively analysed using means and standard deviation and regression and content analysis respectively. The study findings indicated that there was a strong positive significant relationship between human capital readiness and performance of disaster response agencies. The study concludes that human capital readiness is a predictor of performance of disaster response agencies. The study recommends that disaster response agencies enhance personnel skills through training and mentorship. The study recommends that disaster response agencies should adopt flexible budgetary frameworks that enable the efficient allocation of resources to address urgent disaster needs.
Keywords: Human Capital Readiness, Performance of Disaster Response Agencies, Human Capital.

Introduction

Strategic management is a critical process that enables organizations to formulate, implement, and evaluate cross-functional decisions to achieve long-term objectives (David and David, 2017). It involves setting goals, analysing internal and external environments, and allocating resources to gain a competitive advantage (Hill *et al.,* 2020). According to Modgil *et al.,* (2022) within the disaster response sector, strategic readiness is particularly crucial as agencies must efficiently mobilize resources, coordinate stakeholders, and mitigate risks during crises. Disaster response agencies operate in highly unpredictable environments where delays or inefficiencies can lead to catastrophic consequences, including loss of lives and property. Investing in social capital may therefore be a form of insurance that creates resilience to negative shocks to trust (Makridis and Wu, 2021). However, the Covid-19 crisis revealed another way social capital can act as a form of insurance, which is related to the role of government. Many Governments around the world have injected vast amounts of finance into their corporate sectors, in the form of loans, grants and tax breaks. Crisis has become a rampant phenomenon in Nigeria organizations (Adamu and Mohamad, 2019). The country's business organizations have witnessed persistent and recurrent crisis situations over the years; these crises manifest both in the internal and external environment of the organizations. No organization can operate without the occurrence of unexpected or unplanned business disruptions.

In Kenya, Muiru (2023) found that senior management commitment or leadership did not substantially predict effective crisis management. Product innovation was shown to be a highly significant antecedent of crisis management. Process innovations contributors to crisis management. The research also revealed that market innovations were strong crisis management predictors. Following these findings, the study is recommended as follows. Shamsan and Otieno (2015) found out that, in crisis management, corporate communications enhance deliverance of customer service by responding to customer comments and complaints, minimizes discrepancies between the company's desired identity and brand features and enhance building of trust with stakeholders, employees, beneficiaries and organization critics, through commitment to good practice and societal reporting. Gichuhi *et al.,* (2022) found that there was an agreement among the respondents that crisis planning and organizing were emphasized among telecommunication companies in Kenya as a means of driving resilience. Crisis planning and organizing had a positive correlation with organizational resilience. Crisis planning and organizing were significant in predicting resilience. The study thus concluded that crisis planning and organizing using multidisciplinary teams significantly affected organizational resilience in telecommunication companies in Kenya.

Objective of the Study

The objective of the study was to assess how the human capital readiness influences the performance of disaster response agencies in Baringo County, Kenya.

Theoretical Framework

Dynamic capabilities theory proposed by Teece, (2007) is the extension from resource-based view (RBV) of the firm. Dynamic capability is "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece, 2007). The theory of dynamic capabilities aids in identifying the procedures used by a company and its community to overcome challenging circumstances. Dynamic talents are employed by businesses, communities, and times of dynamism to recognize, seize, and transform resources and opportunities. Developing the necessary capabilities is a crucial strategy that business companies must take into account if they want to endure the rapid technological change that the fourth industrial revolution will bring about.

The dynamic capabilities theory argues that organizations must continuously develop, adapt, and reconfigure their resources and competencies to match changing environments. Disaster response agencies in Baringo County operate in unpredictable settings, requiring them to enhance human capital, financial resources, technology, and logistics readiness to improve performance. The ability to anticipate, prepare, and respond to disasters strategically determines their effectiveness. This theory supports human capital, financial, technology, and logistics readiness by emphasizing adaptability in changing environments. Disaster response agencies must continuously train personnel, allocate funds efficiently, adopt new technology, and enhance logistics networks. By dynamically reconfiguring resources, agencies can improve disaster preparedness and response performance.

Literature Review

Fazeli *et al.,* (2024) conducted a comprehensive scoping review to examine the role of individual preparedness and behavioural training in natural hazards. Their analysis of 222 studies revealed a predominance of descriptive research over prescriptive studies, highlighting a significant gap in actionable strategies to enhance individual and community resilience. The review underscores the necessity for valid, hazard-specific preparedness scales and tailored educational interventions to address identified weaknesses in preparedness. The authors advocate for a collaborative approach involving individuals, communities, professional organizations, and governments to effectively mitigate the impacts of natural hazards and improve long-term recovery processes. Kunguma and Mapingure (2023) conducted a review of a short learning programme offered by the University of the Free State's Disaster Management Training and Education Centre for Africa (UFS-DIMTEC). Their study highlights the role of such programmes in enhancing the knowledge and skills of disaster management practitioners. They found that these programmes contribute to the development of proactive attitudes and community engagement, which are essential for effective disaster response.

Ailsa and Gillian (2019) emphasize that the successful implementation of disaster risk reduction strategies, such as the Sendai Framework, heavily relies on the availability of skilled human capital. They argue that many African countries, including South Africa, face challenges in accessing integrated skill sets necessary for effective disaster risk management, particularly in regions with sustained fragility. Komen (2023) investigated the impact of M&E training on the sustainability of disaster emergency preparedness programs

in Uasin Gishu County. The study revealed a significant positive effect of M&E training on program sustainability ($\beta = 0.363$, $p < 0.05$), underscoring the importance of continuous training in enhancing disaster preparedness outcomes. Chepkiyeng *et al.,* (2024) assessed the influence of disaster response awareness on planning within higher learning institutions in Nakuru County. Their findings indicated a strong positive correlation ($r = 0.781$, $p < 0.05$) between awareness levels and planning efficacy, highlighting the role of informed human capital in effective disaster response strategies.

Nyandika (2024) explored the role of adaptive leadership in crisis preparedness among public universities in Kenya. The study found that adaptive leadership significantly influences crisis preparedness, suggesting that leadership agility and decision-making flexibility are vital components of human capital readiness in disaster scenarios. Kiumbani (2023) examined the effectiveness of civil-military coordination during the Solai Dam tragedy in Nakuru County. The study identified human resource factors, such as training and communication, as pivotal in enhancing coordination and response efficiency, thereby improving disaster management outcomes. Abdullahi *et al.,* (2022) emphasized that robust internal control systems, encompassing experienced personnel and effective teamwork, are vital for efficient financial management in disaster situations.

Research Methodology

The study adopted the descriptive survey and targeted 13 disaster response agencies which focused on humanitarian relief in Baringo County, Kenya. The unit of observation was 5 managers from each of the 13 disaster response agencies resulting to a total of 65 respondents. The study used the census design for the organizations and will select the management using purposive sampling. Before data collection, researcher applied for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) to allow for data collection. Relevant authorities were sought from the County Government of Baringo to allow for data collection. Data was collected through questionnaires. Both descriptive and inferential statistical methods were used to analyze the data which was then presented in tables and discussed. A pilot study was carried out in Samburu County, to evaluate questionnaire validity and reliability with a target of 7 respondents. To test for the reliability of the instrument, Cronbach's alpha was used. From the results found, the overall Cronbach's alpha for all the items were above 0.7 implying that the internal consistency of the research instrument was excellent and thus reliable. Quantitative data collected was coded, entered into the Statistical Package for Social Sciences (SPSS) then analysed both descriptively, through frequencies, percentages, means and standard deviations where applicable, and through regression analysis.

Findings

Out of the 65 questionnaires dispatched to the field, 52 were successfully responded to and returned for analysis. It was vital to describe how descriptive analysis was interpreted. The scale was categorized as follows: 4.3–5 denoting Strongly Agree, 3.5–4.2 indicating Agree, 2.5–3.4 representing Undecided, 1.9–2.4 for Disagree, and 1–1.8 reflecting Strongly Disagree (Nemoto and Beglar, 2014; Joshi *et al.,* 2015). The study sought to establish influence of human capital readiness on performance of disaster response agencies. The findings are illustrated in Table 1.

Table 1. Human capital readiness on performance.

Statements	N	Minimum	Maximum	Mean	Standard deviation
Our personnel receive continuous training in disaster response skills.	52	1	5	4.04	.928
We have experienced disaster management staff who enhance response effectiveness.	52	1	5	4.12	.943
Our organization conducts regular disaster preparedness drills.	52	2	5	4.21	.848
Coordination and teamwork among personnel improve disaster response efforts.	52	1	5	4.00	1.252
Our organization has specialized personnel assigned to specific disaster response tasks.	52	1	5	2.50	1.180
Disaster response teams are highly motivated and committed to their roles.	52	1	5	3.04	1.220
We have a structured mentorship program for training new disaster response staff.	52	1	5	4.06	1.195

The highest-rated item is the regular conduct of disaster preparedness drills (Mean = 4.21, SD = 0.848), indicating that agencies actively engage in practical, hands-on readiness activities. Closely following is the presence of experienced disaster management staff (Mean = 4.12, SD = 0.943) and continuous personnel training (Mean = 4.04, SD = 0.928). These findings suggest a strong focus on capacity building and institutional learning, which are essential pillars of strategic disaster response readiness.

Coordination and teamwork also scored relatively high (Mean = 4.00), though with a high standard deviation (SD = 1.252), implying variability in perception across agencies or departments. Similarly, the mentorship program received a strong mean score of 4.06 (SD = 1.195), highlighting institutional efforts to ensure continuity and knowledge transfer through structured learning and support for new staff.

However, the data also points to key areas of concern. The lowest-rated item is the presence of specialized personnel assigned to specific disaster tasks (Mean = 2.50, SD = 1.180), indicating a potential weakness in role specialization and task allocation. This gap could undermine the effectiveness of response operations, especially in complex disaster scenarios requiring specific technical expertise. Additionally, while the commitment and motivation of response teams scored moderately (Mean = 3.04), the high standard deviation (SD = 1.220) reflects inconsistent morale and engagement levels among staff, which could hinder coordinated efforts during emergencies.

In summary, while disaster response agencies in Baringo County exhibit commendable strengths in training, experience, preparedness, and mentorship, there is a critical need to improve task specialization and address disparities in team motivation. Enhancing these areas would likely lead to more cohesive and effective disaster response outcomes.

The study also aligns with Hasan *et al.,* (2022) assessed Bangladeshi nursing students' perceived preparedness and readiness for disaster management activities and examined the influencing factors for the disaster readiness of the students. Further the study was in agreement with a study by Wegmann and Schärrer (2021) who found that forming specialized task forces with skilled personnel enabled the organization to navigate the crisis effectively.

The study is also in agreement with a study by Fazeli *et al.,* (2024) whose study, the role of individual preparedness and behavioural training in natural hazards: a scoping review found that HR leaders play a pivotal role in disaster preparedness by developing policies, conducting training, and ensuring employee well-being. The study is in agreement with studies Njagi (2022) whose study, last mile logistics and service delivery in disaster response among humanitarian organizations in Kenya, revealed that effective last-mile logistics significantly enhance service delivery in disaster response.

Regression Analysis

Before conducting linear regression analysis, it was essential to verify that the data met the assumptions of linearity. Therefore, diagnostic tests were performed as illustrated in Figure 1.

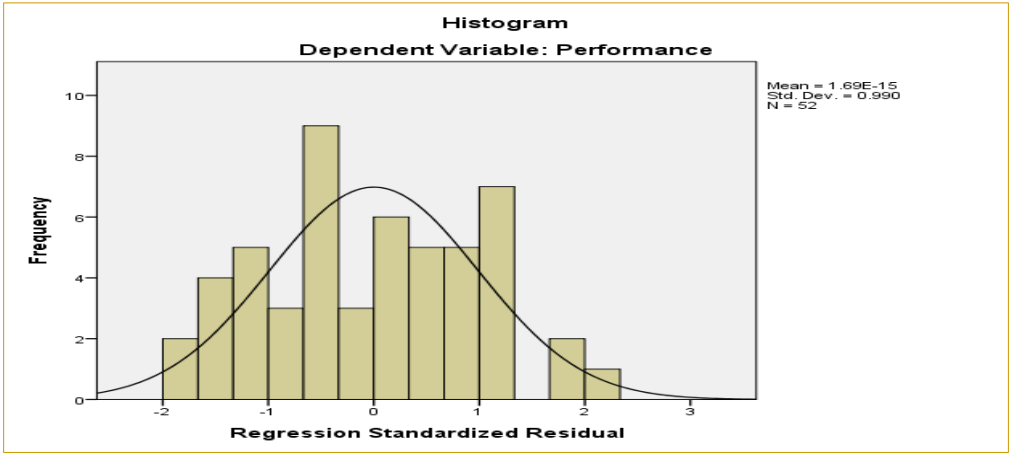

Figure 1. Histogram test for human capital readiness.

The histogram illustrates the distribution of regression standardized residuals for the dependent variable (performance). The bars represent the frequency of residuals, ranging from approximately -3 to 3 on the x-

axis, with a normal distribution curve overlaid. The mean of residuals (1.69E-15) and a standard deviation of 0.990 suggest that the residuals are centered around zero, aligning with expectations for normally distributed errors. A sample size (N = 52) supports the robustness of the analysis. If the residuals closely follow the normal curve, it confirms the assumption of normality, which is crucial for ensuring the validity and reliability of regression estimates.

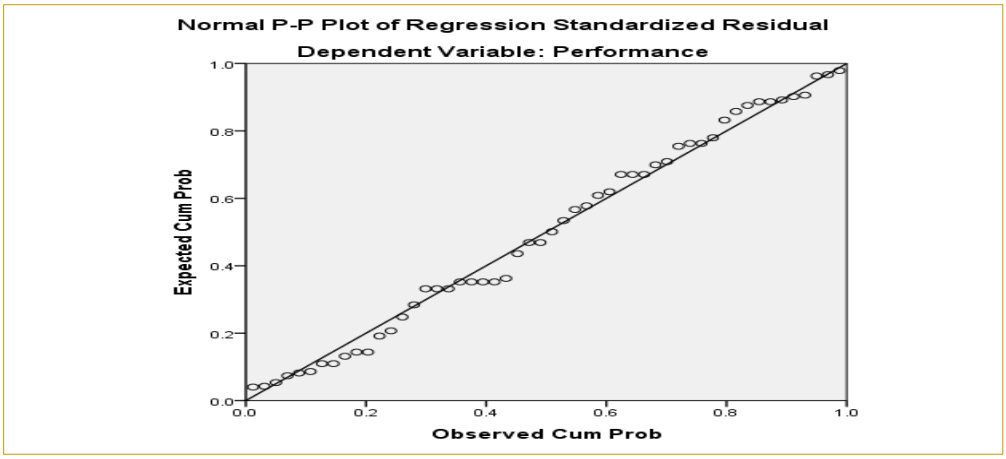

Figure 2. P-P plot of regression for human capital readiness.

The normal P-P plot of regression standardized residuals assesses the normality of residuals in the regression model for performance. The plot compares expected cumulative probability (y-axis) against observed cumulative probability (x-axis), with data points represented by small circles. Ideally, if residuals follow a normal distribution, the points should align closely along the diagonal reference line. In this case, the points generally follow the diagonal, indicating that the assumption of normality is reasonably met.

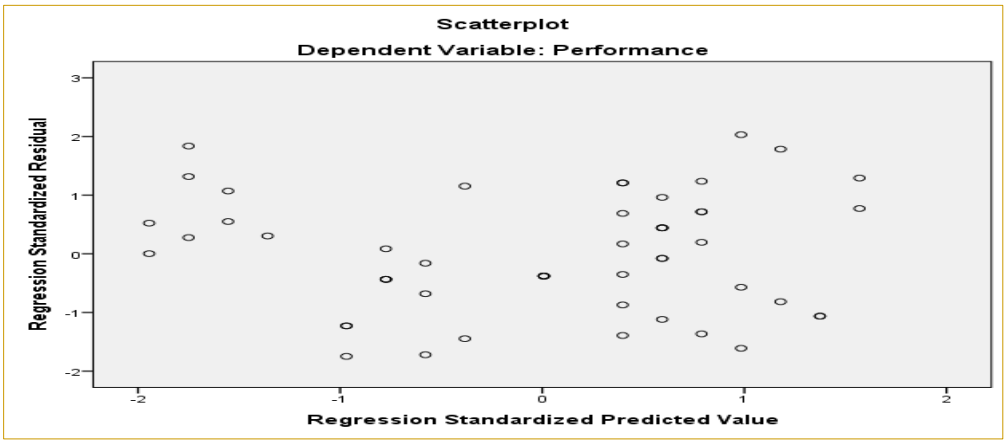

Figure 3. Scatter plot test for human capital readiness and performance.

The scatterplot illustrates the relationship between the regression standardized predicted values and the regression standardized residuals for the dependent variable (performance). The scattered data points provide insights into the distribution of residuals around predicted values, helping to assess the model's validity. Ideally, in a well-fitted regression model, residuals should be randomly dispersed without visible patterns, indicating that assumptions such as homoscedasticity (constant variance of errors) and linearity hold. If the points form a distinct pattern, it may suggest model misspecification, heteroscedasticity, or non-linearity, necessitating further diagnostics or model refinements.

Table 2. ANOVA summary for human capital readiness and performance.

Model		**Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
1	Regression	6.120	1	6.120	81.144	.000[b]
	Residual	3.771	50	.075	-	-
	Total	9.891	51	-	-	-
a. Dependent variable: Performance						
b. Predictors: (Constant), Human capital readiness						

The ANOVA table for the regression model assesses the overall significance of the predictor variable, human capital readiness, in explaining variations in performance. The regression sum of squares (6.120) represents the variation explained by the predictor, while the residual sum of squares (3.771) accounts for unexplained variation. The F-statistic (81.144), with a p-value of .000, indicates a highly significant model, suggesting that human capital readiness has a strong impact on performance. Given the degrees of freedom (df = 1 for regression, 50 for residuals), the model shows a clear explanatory power, reinforcing that the independent variable significantly contributes to predicting the dependent variable.

Table 3. Model summary for human capital readiness and performance.

Model	R	R-square	Adjusted R-square	Standard error of the estimate	Durbin-Watson
1	.787[a]	.619	.611	.27463	1.748
a. Predictors: (Constant), Human capital readiness					
b. Dependent variable: Performance					

The model summary provides key insights into the strength and reliability of the regression model. The R value (.787) indicates a strong positive correlation between human capital readiness and performance, while R-square (.619) suggests that approximately 61.9% of the variation in performance is explained by the predictor. The adjusted R-square (.611) accounts for model complexity, confirming that the predictor remains highly influential even after adjustments. The standard error of the estimate (.27463) reflects the average deviation of actual values from predicted values, demonstrating the model's accuracy. Lastly, the Durbin-Watson statistic (1.748) indicates that residuals show minimal autocorrelation, suggesting independence of errors-a good sign for model validity.

Table 4. Coefficients for human capital readiness and performance.

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Standard error	Beta		
1	(Constant)	2.346	.199	.000	11.811	.000
	Human capital readiness	.473	.053	.000	9.008	.000
a. Dependent variable: Performance						

The coefficients table presents the estimated effects of human capital readiness on performance, incorporating hypothesis testing through the t-values and significance levels (Sig.). The constant (B = 2.346, p = .000) represents the baseline performance when human capital readiness is zero. The predictor variable human capital readiness (B = .473, p = .000) indicates a significant positive impact, meaning a unit increase in human capital readiness leads to a 0.473 increase in performance.

The t-values (11.811 for the constant and 9.008 for the predictor) confirm strong statistical significance, as both have p-values below .05, rejecting the null hypothesis that human capital readiness has no effect. The standardized beta (0.000) suggests the contribution of the predictor in standardized terms. These results strongly support the hypothesis that human capital readiness is a key determinant of performance. The regression model is $Y=2.346+.473X_1$

Conclusion

The study concludes that strategic readiness, and human capital readiness in particular influences performance. Human capital is built through continuous training where the staff is equipped with the necessary skills to respond to disasters. Furthermore, preparedness drills improve staff adaptability, equipping them to make well-informed decisions and respond promptly in crises.

Recommendations

Based on the findings that first, the study recommends that disaster response agencies should;

- ☞ Implement continuous training initiatives to equip personnel with critical skills for effective disaster management.
- ☞ They should also establish structured mentorship programs to facilitate knowledge transfer from experienced personnel. This will ensure expertise development and minimize operational mistakes during disaster response thus enhancing the performance of disaster response agencies.

Declarations
Acknowledgments: I would like to express my sincere gratitude to Dr. Duncan Nyaberi of Jomo Kenyatta University of Agriculture and Technology for his invaluable support, particularly for his meticulous proofreading and the insightful ideas that significantly shaped the implementation of this research.
Author Contributions: ZJK: Definition of intellectual content, literature survey, prepared first draft of manuscript, implementation of study protocol, data collection, data analysis, manuscript preparation; DN: Concept, design, statistical analysis, interpretation, coordination and manuscript revision.
Conflict of Interest: The authors declare no conflict of interest.
Consent to Publish: The authors agree to publish the paper in International Journal of Recent Innovations in Academic Research.
Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.
Funding: This research received no external funding.
Institutional Review Board Statement: Not applicable.
Informed Consent Statement: Not applicable.
Research Content: The research content of the manuscript is original and has not been published elsewhere.

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Citation: Zakia Jemuge Kiptuisang and Duncan Nyaberi. 2025. Strategic Readiness and Performance of Disaster Response Agencies in Baringo County, Kenya. International Journal of Recent Innovations in Academic Research, 9(2): 257-264.