

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH

2022, Vol. 3, No. 8, 1409 – 1414

<http://dx.doi.org/10.11594/ijmaber.03.08.03>

Research Article

Organizational Effectiveness Related to Disaster Risk Reduction Management in Taytay, Rizal, Philippines: Perspective from the Academic Leaders

Clarice Lao¹, Jay R San Pedro^{2*}, Dennis Caballes¹

¹Graduate School, National Teachers College, 1001, Philippines

²Office of Research & Development, Information Communication & Technology Academy (iACADEMY), 1203, Philippines

Article history:

Submission August 2022

Revised August 2022

Accepted August 2022

*Corresponding author:

E-mail:

jay.sanpedro@iacademy.edu.ph

ABSTRACT

Prior to the global health crisis, Taytay, Rizal, Philippines is vulnerable to the different natural disasters and calamities. With this, the researchers see the value of investigating disaster risk reduction management being practiced by the local government unit through the lens of academic leaders. With this, a descriptive research design was implored to gather and substantiate the organizational effectiveness with the research niche. The 100 respondents were selected through purposive and snow-ball sampling who academic leaders from the various educational institutions within the municipality of Taytay, Rizal, Philippines. Based on the findings, it shows that the local government unit of Taytay, Rizal has manifested an effective organizational approach in the implementation of the disaster risk reduction management as perceived by the academic leaders. Afterward, the researchers draft an action plan to further strengthen the disaster risk reduction management plan of the local government unit.

Keywords: *academic leaders, action plan, disaster risk reduction plan, organizational effectiveness*

Introduction

For the past years, the Philippine government devoted itself in providing significant resources to build disaster capacity and reduce population exposure and vulnerability. As reported, the geographical location of the Philippines makes the country uniquely exposed to a plethora of hazards such as recurrent typhoons, earthquakes, tsunamis, floods,

landslides, wildfires, and alike are deadly and costly (Doroteo, 2015). Thus, hazards and climate change, exposure, social vulnerability, physical vulnerability, and other threats are consequently attributing to the Philippines disaster risk profile. Furthermore, the Disaster Risk Reduction Management (DRRM) Act 2010 and the Climate Change Act of 2009 have explicitly indicated environmental protection

How to cite:

Lao, C., Pedro, J. R. S., & Caballes, D. (2022). Organizational Effectiveness Related to Disaster Risk Reduction Management in Taytay, Rizal, Philippines: Perspective from the Academic Leaders. *International Journal of Multidisciplinary: Applied Business and Education Research*. 3 (8), 1409 – 1414. doi: 10.11594/ijmaber.03.08.03

provisions, the monitoring of which is mandated to the NDRRMC and Department of Interior and Local Government (DILG), Department of Environmental and Natural Resources (DENR) and the offices under it have translated certain programs into policies to prepare and protect the Filipino people from different forms of natural disasters. However, there is a great need to harmonize the Philippine government agencies, the private sector, civil society, academia, and communities at risk to address the impending disasters waiting to unfold.

With this, the Philippine government has aligned and adapted various frameworks anchored to the global disaster risk reduction initiatives. These initiatives have evolved as a system that has been continuously expanding and growing in terms of proliferation of actors including governments, Red Cross societies, the United Nations, the private sector, insurance industries, academia, non-governmental organizations (NGOs), and civil society (Lassa, 2018). This system has become a collective humanitarian imperative whereby every actor has a stake in disaster response and risk reduction. Year by year, humanitarian actors have been expanding their mandates from single reactive emergency response toward more diverse sets of mandates. One of the urgent mandates is to ensure that proactive disaster risk reduction (DRR) materializes in all vulnerable localities. Locally, there are studies exploring the nature of the disaster risk reduction models in the Philippines in different layers of the society (Cuya-Antonio & Antonio, 2017; Alcayna et al, 2016; Agapito, 2021; Lamina, 2017). These studies reported that there is still a lack of involvement, experience, and training attuned to disaster management among the members of the community. More so, it emphasized the need to embed disaster education in the Philippine educational system due to the geographical location of the country as well as it can serve as a pillar to enhance community resilience to disasters, gain support for school-led activities, and motivate citizens to participate in local risk assessment and planning. Consequently, this implies that there is a need to investigate the organization effectiveness toward the disaster risk reduction management being implored in each niche of the community.

In this study, the researchers focused on the municipality of Taytay, Rizal, Philippines in the advent of the organizational effectiveness of implementing the disaster risk reduction as perceived by the academic leaders within the niche. It was established that the local government of Taytay, Rizal, Philippines has cascaded several initiated projects to aid their community in light of the disaster risk reduction management. However, there is a need to investigate the organizational effectiveness being implored by the local government in Taytay, Rizal, Philippines perspective from public school academic leaders.

Methods

In perusal of the study, the researchers adopted a descriptive - quantitative research design through survey approach to gauge the organizational effectiveness in imploring the disaster risk reduction management within the research locale as perceived by the respondents of the study. The researchers developed a research instrument that gauges the demographic profile of the respondents, disaster prevention and navigation, disaster preparedness, disaster response, and disaster rehabilitation and recovery (Agapito, 2021). It was validated by experts in the field of disaster risk reduction management, evaluation, and education. Hence, Cronbach alpha test indicates that the instrument has 0.90 coefficient which indicates that it is an excellent tool for the intended purpose (Gliem & Gliem, 2020).

In the data collection phase, the researchers floated the developed research instrument through appropriate channels of communication. With the constraint of the global health crisis, the research adjunct utilized a digital platform in the data collection process in compliance with the health protocol being implemented by the Philippine national government. Furthermore, purposive and snow-ball sampling were used to locate the respondents of the study. The respondents of the study were academic leaders from the educational institutions within the municipality of Taytay, Rizal, Philippines. This yield to 100 respondents after floating the research instrument for 2 months.

In regard to the data processing and analysis, the researchers used a licensed IBM Statistical Package Social Services (SPSS) version 30

with high consideration of observing appropriate protocols and statistical tools.

Results and Discussion

Table 1. Demographic Profile of the Respondents (n = 100)

Profile Variables	Frequency	Percentage
Age		
23 to 32 years old	30	30.30
33 to 42 years old	33	33.30
43 to 52 years old	24	24.20
more than 53 years old	13	13.00
Gender		
Male	13	13.00
Female	87	87.00
Length of Service		
less than 1 year	4	4.00
1 to 3 years	20	20.00
4 to 6 years	11	11.00
more than 6 years	65	65.00

Table 1 shows the demographic profile of the respondents. It shows that the respondents were comprised whose age composition is 30.30% belongs to the age range of 23 to 32 years old, 33.30% belongs to the 33 to 42 years old; 24.20% belongs to the age range of 43 to 52 years old; and 13.00% belongs to age range of more than 53 years old. This implies that the majority of the respondents were relatively young during the conduct of the study.

Meanwhile, the respondents gender composition is 87.00% female and 13.00% were male. Moreover, the respondents' length of service in the public education sector is 4.00% less than 1 year; 20.00% stayed between 1 to 3 years; 11.00% stayed between 4 to 6 years; and the majority stayed more than 6 years based on the 65.00% turnover of the responses. Notably, it shows that the respondents had substantial experiences to provide insights for the study.

Table 2. Respondents Perception about the Disaster Risk Reduction Management (n = 100)

Categories	Weighted Mean	Std. Deviation	Verbal Interpretation
Disaster Prevention and Mitigation	3.90	0.99	Moderately Practiced
Disaster Preparedness	4.00	1.11	Moderately Practiced
Disaster Response	3.95	1.06	Moderately Practiced
Disaster Rehabilitation and Recovery	3.88	1.16	Moderately Practiced
Overall Statistics	3.93	1.08	Moderately Practiced

Statistical Limits: 5.00 to 4.21 - Fully Practiced; 4.20 to 3.41 - Moderately Practiced; 3.40 to 2.61 - Practiced; 2.60 to 1.81 - Partially Practiced; 1.80 to 1.00 - Not Practiced.

Table 2 shows the summary of the respondents' perception toward the disaster risk reduction management being practiced within the research locale. It reveals that the respondents observed that the disaster risk reduction management is moderately being practiced in

Taytay, Rizal, Philippines based on the overall weighted mean of 3.93 with a standard deviation of 1.08. However, the relatively high standard deviation implies that there is a disparity in terms of the perception of the respondents. Furthermore, disaster

preparedness seems the most observed indicator in the research locale which implies that the local government unit and other relevant institutions seem to be paying attention. Meanwhile, disaster rehabilitation and recovery seem to be the least practiced within the locale of Taytay, Rizal Philippines based on the ranking of the statistical values. In support, similar findings were observed in the study of Agapito (2021) and Soriano (2019) in the context that disaster preparedness has the highest rating of practice in the respective niche of study. However, there is a need to have a specific course of actions to adapt in the different social and geographical circumstances (Bowden et al., 2019).

In addition, the researchers noted items of the most and least practiced based on the set of indicators. Notably, in the category of disaster prevention and mitigation, it was noted that the item pertaining to conduct information dissemination on disaster mitigation awareness campaigns was the most practiced among the other indicators for this category. Meanwhile,

crafting a disaster mitigation plan which contributes to coping mechanisms during disaster was the least observed by the respondents. In the second category, identifying places which serve as evacuation centers was the most observed indicator of disaster preparedness. Concurrently, creating a no cost or low-cost disaster kit was the least observed by the respondents. In the third category, managing the distribution of relief goods was highly observed in the category of disaster response. While, managing personnel to handle their roles and responsibilities is the least observed. In the last category, reporting to proper authorities the victims of calamities for financial assistance is the most observed in the category of disaster rehabilitation and recovery. Coordinating water and pipelines was the least observed. It is imperative that the local government of Taytay, Rizal to some extent has manifested an effective organization approach in implementing the disaster risk reduction management.

Table 3. Summary of Independent t-test

Gender Categories	Mean	Std. Deviation	p-value	Interpretation	Decision to H_0
Male	3.91	1.03	0.088	Not Significant	Accept H_0
Female	3.93	1.05			

$\alpha = 0.05$

Table 3 shows the summary of the independent t-test. It shows that there is no significant difference in the respondents' perception toward the organizational effectiveness in light

of the disaster risk reduction management when grouped according to their gender ($p = 0.767 > 0.05$).

Table 4. Summary of One-Way Analysis of Variance for Age

Age Categories	Mean	Std. Deviation	f-value	p-value	Interpretation	Decision to H_0
23 to 32 years old	3.78	1.11	1.264	0.291	Not Significant	Accept H_0
33 to 42 years old	3.87	1.03				
43 to 52 years old	3.92	0.98				
more than 53 years old	4.43	0.95				

$\alpha = 0.05$

Table 4 shows the summary of the one-way Analysis of Variance (ANOVA). It reveals that there is no significant difference in the perception of the respondents toward the disaster risk

reduction management implored when grouped according to age ($f = 1.264$, $p = 0.291 > 0.05$).

Table 5. Summary of One-Way Analysis of Variance for Length of Service

Length of Service Categories	Mean	Std. Deviation	f-value	p-value	Interpretation	Decision to H ₀
less than 1 year	3.86	0.42	1.603	0.194	Not Significant	Accept H ₀
1 to 3 years	3.53	1.13				
4 to 6 years	4.31	0.74				
more than 6 years	3.99	1.06				

$\alpha = 0.05$

Table 5 shows the summary of the one-way Analysis of Variance (ANOVA). It shows that there is no significant difference in the perception of the respondents toward the disaster risk reduction management implored when grouped according to length of service ($f = 1.603$, $p = 0.194 > 0.05$).

Notably, it confirms that the respondents have a unifying perception toward the disaster risk reduction management being implemented by the local government unity of Taytay, Rizal, Philippines when grouped according to age, gender, and length of service despite the disparity in the standard deviation.

Conclusion

With the vulnerability of Taytay, Rizal, Philippines to the different natural disasters, it is deemed to hold an investigation about the disaster risk reduction management being practiced by the local government unit. Based on the findings, it shows that the local government unit of Taytay, Rizal has manifested an effective organizational approach in the implementation of the disaster risk reduction management as perceived by the academic leaders. However, the following salient points are recommendation to be reconsidered to further improve the disaster plan of the community:

1. Continuous conduct of training/seminars/workshops related to disaster risk management should be carried out. However, these trainings/seminars/workshops should also reconsider in reinforcing the other domain of the disaster risk management specifically in the domain of disaster rehabilitation and recovery and disaster prevention and mitigation;
2. Crafting a disaster mitigation plan, availability of low-cost disaster kit, and coordination for water and pipelines should be

reconsider by the local government unit to further strengthen the disaster risk reduction management and response;

3. Disaster risk education policies should be drawn and implemented considering the local development planning and future growth strategies; and
4. To ensure disaster risk reduction management, regular monitoring and evaluation should be carried out.

Acknowledgement

The researchers would like to express the deepest gratitude to Dr. Dennis Caballes for shedding directions in the pursuit of the study. Furthermore, the cooperation shown by the respondents amidst the challenges of the global health crisis in helping the researchers in conducting this study.

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