

Interplay of disaster mitigation skills with resiliency quotient, work commitment, and work ethics: The case of disaster risk reduction and management officers in the province of Nueva Vizcaya

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Abstract

This study assessed the disaster risk reduction management skills, resiliency quotient, work ethics, and work commitment; unveiled the significant relationship between disaster risk reduction management skills, resiliency quotient, work ethics, and work commitment, between resiliency quotient and work commitment, between resiliency quotient and work ethics, between work ethics and work commitment, in order to propose an Organization Development and Planning (ODP) intervention program. This quantitative study employed descriptive-correlational method. Mean and Pearson-r were used in analyzing the data from the 89 DRRM officials of the 15 municipalities of Nueva Vizcaya, including the provincial DRRM. The findings revealed that there is a very high disaster risk reduction management skill, very good resiliency quotient, very good work ethics, and high work commitment. There is no significant relationship between disaster risk reduction management skills and resiliency quotient, and between disaster risk reduction management skills and work ethics, but there is a significant relationship between disaster risk reduction management skills and work commitment. There is a significant relationship between resiliency quotient and work ethics, and no significant relationship between resiliency quotient and work commitment. There is a significant relationship between work ethics and work commitment. Barangay disaster risk reduction officials may further develop their very high level of disaster risk reduction management skills through trainings. They may participate in programs aimed at further strengthening areas like determination, interaction, and problem-solving. They may continue demonstrating strong work ethics while addressing areas needing improvement, such as leisure management. Implementing incentive programs and celebrating successes may encourage sustained engagement and motivation among the team. They may also engage in collaborative disaster preparedness exercises; may consider integrated programs combining resilience-building strategies with ethical decision-making workshops; may join in leadership

coaching, community-based projects and initiatives that focus on ethical leadership and accountability. The proposed ODP intervention may be conducted.

Keywords: disaster risk reduction management skills, DRRM, ODP intervention program, resiliency quotient, work commitment, work ethics

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1. Introduction

Disaster management is widely recognized globally as a multifaceted process that requires adept and resilient individuals capable of performing well under pressure. Disaster Risk Reduction and Management (DRRM) is very important for reducing the negative effects of natural disasters on communities. Effective DRRM is not just reliant on resources or systems; it also depends on the human attributes of the personnel implementing and leading disaster response initiatives. The Barangay Disaster Risk Reduction and Management Officers (BDRMOs) are essential for disaster preparation, mitigation, response, and recovery at the community level. Although technical skills and resources are important for the success of DRRM at the local level, the personal attributes of BDRMOs, such as their resilience, commitment, and work ethics, significantly influence the effectiveness of DRRM implementation at the local level. Understanding the role of these characteristics in enhancing DRRM skills and performance is essential for advancing disaster management in communities, particularly in provinces such as Nueva Vizcaya.

Countries prone to disasters, like Japan, the United States, and Australia, have established disaster management systems that emphasize resilience, competence, and commitment among emergency responders. Despite developments in disaster management technology, the inherent traits of responders significantly influence the efficacy of disaster response. Hino (2016) emphasized the significance of resilience in disaster recovery through study. Resilient people are more likely to effectively manage stress, make adaptive judgments, and maintain commitment throughout disasters. This capability to maintain concentration and optimism throughout a disaster improves their ability to organize responses efficiently and reduce the event's impact on those affected.

The significance of work ethics has increased substantially in disaster management. Responsibility, competence, and integrity are important elements of effective disaster response. Green and Peterson (2019) said that the urgency of emergency personnel's commitment to their duties is the most significant performance motivator in times of crisis. These characteristics will determine the disaster management personnel's ability to maintain focus, adapt to situational changes, and successfully implement emergency response methods. The relationship among resilience, work commitment, and work ethics in the context of disaster management remains unexplored. This research is significant due to the need of examining how these traits influence local disaster management practices.

The Philippines is among the nations most vulnerable to natural disasters, including typhoons, earthquakes, floods, and other calamities. Over the years, the nation has developed its disaster management frameworks. The government has developed many disaster preparation and response systems, including the National Disaster Risk Reduction and Management Council (NDRRMC). Significant work needed at the barangay level, since these local entities often face resource constraints and elevated catastrophe risks. Local DRRM officials, particularly BDRMOs, oversee disaster response and recovery activities within their designated jurisdictions; yet, the efficacy of these officers is affected by their individual traits. Research indicates that the commitment of these officers and the ethical standards upheld in their workplace are important for the successful implementation of disaster management plans, particularly in overcoming resource deficiencies, lack of formal training, and insufficient support from higher authorities (Garcia et al., 2018).

Cruz et al. (2020) demonstrated that the commitment of local disaster management officers is a significant variable in the successful implementation of disaster risk reduction and management actions in the Philippines.

This, however, is not only determined by external variables like compensation or job opportunities; internal traits like as resilience and work ethic are significant in this context. Officers with more resilience are far more adept at handling stress, making judgments under pressure, and persevering despite dissatisfaction. Conversely, officers with inadequate work ethics may become dissatisfied or disengaged, adversely affecting their capacity to react effectively to disasters. Rivera et al. (2020) contend that work ethic, including accountability, competence, and commitment, is an important attribute for local DRRM officers to overcome problems related to insufficient resources and organizational support. This necessitates a comprehensive study of the influence of individual attributes on disaster management at the barangay level, particularly in Nueva Vizcaya and neighboring provinces.

Nueva Vizcaya is prone to many natural disasters, including landslides, floods, and typhoons. The province has encountered several challenges in disaster management, particularly at the barangay level, where local DRRM officials are tasked with responding to risks with constrained resources and inadequate training. While the provincial government has contributed to enhancing disaster preparedness and response, the efficacy of these initiatives is dependent upon the performance of BDRMOs. Tan et al. (2021) assert that in rural areas such as Nueva Vizcaya, the efficacy of BDRMOs is dependent upon individual resilience and commitment to their responsibilities during disaster risk management.

BDRMOs in Nueva Vizcaya have several problems, including insufficient formal training, inadequate infrastructure, and difficulties in interacting with isolated areas. The aforementioned problems highlight the significance of human qualities such as work ethic and resilience. Rivera et al. (2020) assert that resilient disaster management officers maintain their commitment to their roles throughout challenging periods, hence assuring the continuation of preparation and response operations for disasters. Additional work ethics include competence and accountability, which enable DRRM personnel to do their duties with minimum constraints. Nonetheless, there is little study investigating the roles of resilience quotient, work ethics, and work commitment among BDRMOs in Nueva Vizcaya. This research sought to address this gap by examining the correlation between these variables and disaster management skills.

Moreover, being a province with people dependent on agriculture, these areas are particularly prone to climate-induced calamities, including floods and landslides. Consequently, the effective implementation of the BDRMOs' disaster risk management initiatives plays an important part in mitigating the effects of risks caused by such disasters on the affected communities. The significance of resilience and work commitment among BDRMOs is essential for the efficient implementation of these programs, particularly when confronted with problems like resource constraint and logistic difficulties. Garcia et al. (2018) assert that BDRMOs exhibiting strong work ethics and substantial resilience are more inclined to take initiative, adjust to changing circumstances, and sustain the commitment necessary for enduring disaster risk reduction. This indicates the need for the integration of these components for successful disaster management in rural areas.

The study examined BDRMOs' beliefs of their resilience quotient, work ethics, and work commitment, and how these perceptions influence their disaster risk management strategies. This research would enhance comprehension of the factors influencing disaster management at the barangay level. The results suggest practical implications for developing more effective training programs and interventions aimed at improving the resilience, work ethic, and commitment of local disaster management officials. This may improve disaster preparation and response initiatives in Nueva Vizcaya, fostering resilience to potential disasters.

2. Related Literature

This study was rooted in established theories that underpin its theoretical framework and conceptual underpinnings. One foundational theory shaping this research is Michael Rutter's Resilience Theory (2006), which defines resilience as the ability to adapt successfully to adverse circumstances through appropriate resources rather than solely relying on inherent psychological traits. Rutter's framework emphasizes the capacity

to rebound from challenges, such as adversity, failure, conflict, and misfortune, assisting both individuals and organizations in their recovery processes.

The study's exploration of work ethics does not stem from a specific theoretical framework. Instead, it underscores the inherent connection between ethics and public service values within the realm of public administration, as highlighted by Menzel (2003). Menzel's work emphasizes that ethics and public service values are integral elements constituting the essence of public administration. Scholars and practitioners have endeavored to comprehend the ethical responsibilities of public administrators and have proposed frameworks for ethical guidance within the sector.

In contrast, the Theory of Work Commitment by Carmeli (2007) serves as another guiding theoretical framework. Carmeli's theory meticulously examines the structure of work commitment by categorizing and outlining the content areas within the domain of work commitment. It emphasizes that evaluating multiple dimensions of commitment provides a more comprehensive understanding compared to a singular measure. This multifaceted approach allows for a deeper exploration of individuals' work commitment. However, while this study focuses on two facets of the theory, it suggests the potential for future research to integrate the complete framework to gain a more holistic understanding of work commitment's complexities. However, this study drew attention to a significant gap: the separation of discussions around ethical responsibilities from fundamental values associated with leadership. It highlights the need to amalgamate these discussions, integrating the ethical responsibilities of administrators with the core values inherent in leadership roles. The study thus advocates for a more holistic exploration that intertwines ethical considerations with leadership values.

It is worthy to note that while Rutter's Resilience Theory and Carmeli's Theory of Work Commitment offer structured frameworks for understanding resilience and work commitment respectively, the study recognizes the need for a more comprehensive approach to work ethics within the realm of public administration. It underscores the importance of aligning ethical responsibilities with the foundational values associated with leadership roles, aiming for a more integrated and inclusive exploration of administrative ethics. This integration could potentially enrich discussions and practices concerning ethical conduct within public administration, fostering a more cohesive and value-driven approach in this domain.

The ethical obligations of public administrators emerge from several distinct dimensions within the public sector. These obligations encompass three fundamental realms: upholding processes that validate the actions of public officials, serving the public interest, and fostering respectful, honest, and fair treatment among colleagues and subordinates. Some authorities assert that public administration, inherently a "moral endeavor," demands unique moral character and heightened moral obligations due to the significant moral weight carried by roles within the public sector, distinguishing them from their private sector counterparts. This is entrenched within the context of the Philippines, as specified by the Local Government Code of 1991.

The Local Government Code of 1991 stands as a foundational legislation designed to bolster the power, independence, and accountability of local units. It sets forth a policy framework aimed at democratizing governance at the grassroots level, empowering citizens by granting them significant opportunities for active participation in government affairs. It delegates responsibility for delivering essential services to these local units, equipping them with the necessary resources, personnel, assets, and programs. Moreover, the Code delineates the legal role of municipalities within the Philippine context. Functioning as a conglomerate of barangays, a municipality primarily acts as a general-purpose government entrusted with coordinating and providing essential, routine, and direct services to its inhabitants within its territorial jurisdiction. Essentially a political corporate entity, the municipality operates through its municipal government in accordance with the law. It operates as a subsidiary of the province, housing several barangays within its territorial boundaries, with one serving as the administrative hub located in the town proper.

The Code also mandates that each local government unit devise and implement its organizational structure and staffing pattern, aligning these with their service requirements and financial capabilities while adhering to

the minimum standards and guidelines set by the Civil Service Commission. Furthermore, it champions greater local autonomy, striving to bring governance closer to the populace. As local governments assume more significant roles in public service provision, the demand for responsive, principled human resources becomes paramount. Employees are expected to serve the "common tao" – the general public – with utmost integrity, honesty, and unwavering commitment.

In essence, the Local Government Code of 1991 serves as a cornerstone legislation shaping the landscape of local governance in the Philippines, fostering autonomy, accountability, and the imperative ethical values essential for public administrators and employees to effectively serve their communities. Hence, the framework for this study was grounded in several interrelated theories that collectively offer a comprehensive understanding of key factors in effective disaster risk management. The integration of these theories provides a valuable paradigm for examining the variables of disaster risk reduction management skills, resiliency quotient, work ethics, and work commitment among Disaster Risk Reduction and Management (DRRM) officials.

3. Methodology

Research Design. This research employed a quantitative research design, a systematic process of collecting and analysing numerical data. Quantitative research is often used to identify patterns and averages, make predictions, test causal relationships, and generalize findings to larger populations (Bhandari, 2021). This methodology was selected to test theories regarding individuals' attitudes and behaviors, based on statistical evidence. The data collected can be transformed into useful information, which can then be utilized for predictions or forecasts related to products or services. Generally, quantitative research is a common approach within the social sciences. In this study, the researcher utilized mathematical and statistical theories, alongside other analytical methods, to interpret the data. This study employed a descriptive research method, with a specific focus on the correlational method. Descriptive research is designed to describe the characteristics of a phenomenon, situation, or population. It uses both quantitative and qualitative approaches to address research problems with limited prior information. This method does not seek to explain *why* an event occurs but rather focuses on describing *how* patterns change, what causes these changes, and when they occur (Harrapa, 2021).

Research Environment. Nueva Vizcaya is an important area for the study of resilience and disaster risk management because of its geographic exposure to a range of environmental hazards, including landslides, flooding, and typhoons. Because of this, Nueva Vizcaya is a pertinent and useful location for studies on the work ethics, commitment, and resilience quotient of barangay DRRM officers. Because of its varied terrain—mountains, plains, and valleys—the province is particularly vulnerable to a range of natural disasters, particularly during the rainy season when typhoons and intense rainfall can result in floods and landslides. This situation emphasizes the value of Barangay DRRM officers, who are on the ground and spearhead grassroots efforts to prepare for, respond to, and mitigate disasters.

Respondents of the Study. The respondents to the research were selected from every municipality in Nueva Vizcaya, including local barangay DRRM officers and provincial DRRM office representatives. Their varied backgrounds and important responsibilities in disaster risk management provide a great basis for examining the province's disaster management framework's fundamental themes of work ethics, commitment, and resilience quotient. Through their involvement, these results will significantly enhance resilience, planning, and response to disasters in Nueva Vizcaya and other similar provinces in the country.

Sampling Procedure. Barangay Disaster Risk Reduction and Management (DRRM) officers and provincial DRRM officials from every municipality in Nueva Vizcaya are the study's respondents. The researcher used stratified random sampling to guarantee the sample's representativeness, first classifying municipalities into strata. This study then used random sampling, giving each officer an equal chance of being selected from each stratum. By doing this, the research may provide a comprehensive view of how resilient DRRM officers are in terms of work ethics and commitment in various municipal settings. Throughout the investigation, the researcher

followed ethical considerations. Informed consent was given to each respondent. They were made aware of the study's objectives and their freedom to withdraw at any moment. The confidentiality of the responses was guaranteed. Every piece of information gathered was anonymized and stored securely. The emphasis was on voluntary engagement. If they choose not to take part, there would be no consequences. Lastly, to guarantee adherence to ethical norms, approval to conduct was obtained from the appropriate authorities. Therefore, ethical issues ensure the integrity of a study and even safeguard the respondents' welfare.

Research Instruments. Data needed in this research study were collected using the following instruments:

- **Disaster Risk Reduction Management Skills Questionnaire.** This instrument was adopted from Vadil and Castriciones (2022) consisting of 60 items distributed to the dimensions: risk assessment, planning and preparedness, knowledge of disaster management systems, environmental awareness, community engagement and communication, technical skills, resource management, continual learning and adaptation policy and advocacy, and crisis leadership.
- **Resilience Assessment Questionnaire.** This is a 40-item questionnaire that measures the resiliency quotient level of the respondents along vision, determination, interaction, relationships, problem solving, organization, and self-confidence. This was developed in 2002 by the Management Advisory Service (UK) (MAS).
- **Questionnaire on Work Ethics.** This is a 65-item questionnaire that measured the resiliency quotient level of the respondents along self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification. This was lifted from the study of Miller et al. (2001).
- **Commitment Questionnaire.** This is a 16-item questionnaire that assessed the level of work commitment of the respondents. The questionnaire was lifted from the validated questionnaire of Ramis (2002) as utilized by Orcales (2014) in his study.

Statistical Tools. Data collected from the respondents' responses to the research instruments were tabulated and analyzed using the following statistical tools.

- **Mean.** This was employed to establish the respondents' levels of disaster risk management skills, resiliency quotient, work ethics, and work commitment.
- **Pearson Product-Moment Correlation Coefficient or Pearson r.** This was used to determine significant correlations between and among the independent and dependent variables considered in this study.

4. Results and Discussion

Problem 1. How do the Disaster Risk Reduction and Management Officials perceive their disaster risk reduction management skills along risk assessment, planning and preparedness, knowledge of disaster systems, environmental awareness, community engagement and communication, technical skills, resource management, continual learning and adaptation, policy and advocacy, and crisis leadership?

To arrive at the answer to this problem, the mean of each dimension of the disaster skills of the respondents was computed. The grand mean of 3.61 reflects a high level of skills among Barangay Disaster Risk Reduction Management Officers in Nueva Vizcaya. Their ability to address disaster-related challenges across all dimensions suggests a well-rounded proficiency in disaster management. The results are presented in table 2. This result indicates that barangay-level officers in Nueva Vizcaya are equipped to handle various aspects of disaster risk reduction. However, the slightly lower scores in Technical Skills ($\bar{x}=3.53$) and Resource Management ($\bar{x}=3.57$) suggest areas for targeted capacity-building, particularly in leveraging technology and optimizing resource allocation. De Guzman (2022) highlights the importance of local disaster planning and

preparedness, noting that barangay level officers in the Philippines play a crucial role in implementing the National Disaster Risk Reduction and Management Plan (NDRRMP). In addition, Castillo et al. (2020) stress the need for strong risk assessment models at the barangay level to address localized vulnerabilities effectively.

Table 2

Respondents' Level of Disaster Risk Reduction Management Skills

Disaster Risk Reduction Management Skill	Mean	Qualitative Description
Risk Assessment	3.63	High
Planning and Preparedness	3.66	High
Knowledge of Disaster Management System	3.65	High
Environmental Awareness	3.65	High
Community Engagement and Communication	3.63	High
Technical Skills	3.53	High
Resource Management	3.57	High
Continual Learning and Adaptation	3.57	High
Policy and Advocacy	3.59	High
Crisis Leadership	3.60	High
Grand Mean	3.61	High

Problem 2. What are the respondents' perceptions of their resiliency quotient along the dimensions of vision, determination, interaction relationship, problem solving, organization and self-confidence?

To come up with the answer to this question, the mean of each component of resiliency quotient was computed, the results of which are the basis for determining the grand mean. Results are presented in table 3.

Table 3

Respondents' Level of Resiliency Quotient

Resiliency Quotient	Mean	Qualitative Description
Vision	4.21	Very Good
Determination	3.89	Very Good
Interaction	4.12	Very Good
Relationships	3.84	Very Good
Problem Solving	3.95	Very Good
Organization	3.67	Very Good
Self-confidence	3.91	Very Good
Grand Mean	3.94	Very Good

The barangay officers exhibit a high level of resiliency across all evaluated dimensions, demonstrating their ability to adapt and respond effectively to challenges and crises. The "Very Good" rating for the overall resiliency quotient indicates a strong foundation of emotional, cognitive, and interpersonal resilience. This finding suggests that the barangay officers are well-equipped to handle disaster-related challenges and can maintain their effectiveness under pressure. However, while all dimensions are rated highly, continuous improvement, particularly in organizational skills ($\bar{x}=3.67$), can help ensure consistent performance across different roles and situations. Ocampo et al. (2020) highlight the role of a strong resilience quotient in overcoming the psychological and physical impacts of disasters. Driscoll and Tiedemann (2023) connect workplace resilience to clarity of purpose and vision, both of which are key for leaders during crises.

Problem 3. What are the respondents' perceptions of their work ethics along self-reliance morality or ethics, leisure, hard work, wasted time and delay of gratification?

To answer this problem, the means of the components of work ethics were computed as basis for determining their perceptions of work ethics. The results are presented in table 4. The **grand mean** of ($\bar{x}=3.93$) places the overall work ethics of the Barangay Disaster Risk Reduction Management Officers (BDRRMO) in Nueva Vizcaya in the "**Very Good**" category. This indicates that, overall, the officers demonstrate a high level of professionalism, responsibility, and commitment to their work. This suggests that the officers possess very good work ethics, which is important for their roles in disaster risk management. In the context of Nueva

Vizcaya, a province prone to natural disasters, this level of work ethics implies that the officers are dedicated to ensuring the safety and well-being of their communities. Their work ethics likely contribute to more efficient disaster preparedness, response, and recovery efforts. The result suggests that these officers consistently put in the effort required, even in difficult and stressful situations, contributing to better outcomes in managing disaster risks.

However, it also suggests that while the officers perform well, there may still be areas for potential improvement. For instance, improving certain dimension (like leisure) could help reduce burnout, ensuring that they can sustain their high performance over the long term. Cruz and Enriquez (2020) highlight that strong work ethics are essential for effective disaster management, particularly in areas like Nueva Vizcaya, where resources can be limited. The officers' strong work ethic helps them navigate the challenges of limited infrastructure, resources, and external support during disasters, improving overall disaster resilience. Additionally, Peña and Gutierrez (2020) emphasize that disaster management officers who exhibit high levels of professionalism and commitment tend to have better disaster response and recovery outcomes.

Table 4
Respondents' Level of Work Ethics

Work Ethics	Mean	Qualitative Description
Self-reliance	4.03	Very Good
Morality/ Ethics	3.63	Very Good
Leisure	2.95	Good
Hardwork	4.42	Very Good
Centrality of Work	4.12	Very Good
Wasted Time	4.13	Very Good
Delay of Gratification	4.25	Very Good
Grand Mean	3.93	Very Good

Problem 4. What are the perceptions of the respondents of their moral commitment?

To arrive at the answers to this problem the mean of the respondents' responses was computed, the result of which is displayed in table 5.

Table 5
Respondents' Level of Work Commitment

Variable	Mean	Qualitative Description
Work Commitment	4.31	High

The 4.31 (High) indicates that the **Barangay Disaster Risk Reduction Management Officers (BDRRMO)** in Nueva Vizcaya exhibit a strong commitment to their roles. This high score reflects their dedication to their duties in disaster risk management, suggesting they are highly engaged, responsible, and motivated in fulfilling their responsibilities. Work commitment in this context appears to be an essential characteristic of the officers' professional approach. The respondents often make things happen ($\bar{x}=4.10$); often welcome innovations in their job ($\bar{x}=4.45$); often see challenges as opportunities for learning ($\bar{x}=4.47$); often suggest innovative projects for their offices ($\bar{x}=4.24$); often implement innovative projects in their organization ($\bar{x}=4.13$); often get excited with new ideas ($\bar{x}=4.47$); are often good at brainstorming on a problem to generate options ($\bar{x}=4.10$); often think that their job is fascinating ($\bar{x}=4.35$); that often, their job is routine ($\bar{x}=4.13$); they often have chances to do creative jobs ($\bar{x}=4.20$); often have the chance to get respected jobs ($\bar{x}=4.28$); often view their job as challenging ($\bar{x}=4.54$); their job gives a sense of accomplishment ($\bar{x}=4.47$); they often are willing to work an extra mile ($\bar{x}=4.38$); often do not like to miss a work day ($\bar{x}=4.10$); and often see to it that their job is done the best way ($\bar{x}=4.57$).

A high level of work commitment has several important implications for the BDRRMOs in Nueva Vizcaya. A strong work commitment is often linked to better performance in disaster risk management roles. The officers' dedication implies that they are likely to go beyond basic job requirements, contributing significantly to planning, preparation, response, and recovery efforts during disasters. In a province like Nueva Vizcaya, which faces

natural hazards such as typhoons and floods, the officers' readiness and commitment ensure effective and timely responses, leading to better outcomes for the community. Additionally, when officers are committed to their work, they are more likely to remain consistent and reliable, even in the face of disaster. High work commitment means they are more likely to stay engaged during crises, maintaining focus on their tasks despite external pressures. This level of resilience is especially important in disaster-prone areas like Nueva Vizcaya, where the challenges are often prolonged and can lead to fatigue and burnout without strong personal and professional commitment.

Furthermore, high work commitment is often correlated with high job satisfaction and lower turnover rates. In the context of BDRRMOs, this suggests that officers who feel a strong sense of commitment to their roles are more likely to remain in the job long-term, which is important for maintaining continuity in disaster preparedness efforts. Their sustained involvement also builds a deeper understanding of local risks and improves the community's capacity for effective disaster management. However, while this level of commitment is an asset, it is also important to balance work commitment with self-care and leisure. Overworking, even with high commitment, can lead to burnout, which may eventually reduce the officers' effectiveness.

Problem 5. Are there significant relationships between the respondents' disaster mitigation skills and their resiliency quotient, work ethics and work commitment?

To determine whether significant relationships between disaster mitigation skills and resiliency quotient, work ethics, and work commitment, the Pearson-r was used. The results are reflected in table 6.

Table 6

Summary of Correlation between the Respondents' Disaster Risk Reduction Management Skills and Their Resiliency Quotient, Work Ethics, and Work Commitment (df=87)

Variables	Computed r-value	Critical r-value	Remarks
Disaster Risk Reduction Management Skills and Resiliency Quotient	0.036	0.207	Not Significant
Disaster Risk Reduction Management Skills and Work Ethics	0.157	0.207	Not Significant
Disaster Risk Reduction Management Skills and Work Commitment	0.450	0.207	Significant

Table 6 presents the correlation between independent variable and dependent variables. Disaster Risk Reduction Management Skills and Resiliency Quotient. The computed r-value is 0.036. The result shows that the correlation between Disaster Risk Reduction Management Skills and Resiliency Quotient is very weak and not statistically significant. This finding suggests that there is little to no relationship between the BDRRM Officers' disaster risk reduction management skills and their resiliency quotient. A key implication could be that improving skills in disaster management does not directly enhance the officers' personal resiliency. While resiliency is a critical trait for disaster management, it may depend more on personal experiences, community support systems, and psychological factors rather than technical skills in risk management.

Research on disaster management systems emphasizes that while skills in disaster preparedness and management are important (Solis et al., 2019; Repetto & Zohar, 2021), the resiliency quotient (including personal determination, adaptability, and emotional resilience) often derives from broader factors such as community engagement and social support networks (Hines et al., 2018; Adiong, 2020). This finding aligns with the idea that technical skills and personal resiliency may function independently, with resilience often stemming from other sources outside formal training or skill development. Disaster Risk Reduction Management Skills and Work Ethics. The computed r-value is 0.157, which indicates a weak, non-significant relationship between Disaster Risk Reduction Management Skills and Work Ethics.

This suggests that while disaster risk management skills might influence an officer's effectiveness in their

role, it does not have a strong or statistically significant influence on the officer's work ethics. In practice, this may imply that the values and attitudes towards work ethics (e.g., commitment, integrity, responsibility) are influenced by personal or external factors, rather than solely by the skills gained through disaster risk reduction training. Therefore, efforts to improve work ethics among BDRRM Officers may require initiatives beyond skills training, such as moral development or leadership-focused programs.

Work ethics in disaster management are often related to organizational culture and individual values rather than just technical skills (McCallum et al., 2023; Santos & Alvarado, 2019). According to studies on disaster preparedness and management, ethical behavior often hinges on personal integrity and community-driven initiatives (Dewille et al., 2022; Gomez & Bonifacio, 2021), which are influenced by societal values and personal commitment more than by formal risk management expertise. Disaster Risk Reduction Management Skills and Work Commitment. The computed r-value is 0.450, which indicates a moderate to strong significant positive relationship between Disaster Risk Reduction Management Skills and Work Commitment.

This result suggests that as the skills in disaster risk management improve, the work commitment of BDRRM Officers also increases. This relationship is statistically significant, meaning that better-trained officers are more likely to be committed to their roles and responsibilities. This could be interpreted as a positive outcome of skill enhancement programs, where officers feel more confident and capable in their roles, leading to a stronger sense of duty and commitment to their work.

Research suggests that work commitment in high-risk disaster management occupations is often linked to the perceived effectiveness and preparedness of the officers (Nichols & Simpson, 2019; Turner et al., 2021). A study by De Guzman (2022) also highlighted that knowledge and skills in disaster preparedness are crucial for fostering greater commitment among local disaster response teams. This aligns with the finding that disaster management skills and work commitment are positively related, emphasizing the importance of training programs that enhance both technical competencies and psychological commitment to the role.

Problem 6. Is there a significant relationship between the respondents' resiliency quotient and work ethics?

To come up to the answer to this question. The computer r-value and p-value were determined; the result exhibited in table 7.

Table 7
Summary of Correlation between Respondents' Resiliency Quotient and Work Ethics (n=89)

Variables	Computed r-value	p-value	Remarks
Resiliency Quotient and Work Ethics	0.556	0.000	Significant

The computed r-value is 0.556 and 0.000 p-value, indicating a moderate to strong significant positive relationship between Resiliency Quotient and Work Ethics. The positive and statistically significant relationship suggests that Resiliency Quotient (i.e., personal adaptability, emotional strength, and the ability to bounce back after setbacks) has a meaningful influence on Work Ethics (i.e., attitudes towards responsibility, dedication, and integrity in work). In the context of Barangay Disaster Risk Reduction Management (BDRRM) Officers in Nueva Vizcaya, this finding indicates that officers who are more resilient in facing challenges and stress are likely to demonstrate stronger work ethics. These individuals may be more committed, diligent, and responsible in performing their duties, particularly under the high-pressure conditions that often accompany disaster management efforts.

For BDRRM Officers, fostering resilience could be a key strategy for improving work ethics in the workplace. Providing training or interventions that boost emotional and psychological resilience may lead to more dedicated and responsible behavior in disaster management tasks. Furthermore, programs focused on stress management, emotional intelligence, and coping mechanisms could help officers better navigate the pressures they face, resulting in a more committed and ethical approach to their duties.

Studies show that resiliency plays an important role in work behavior, including work ethics (Bartlett et al., 2021; Clarke & Evers, 2022). In high-stress occupations like disaster risk management, resilience has been found to help individuals maintain a positive outlook and high levels of work engagement, even when faced with adversity (Barnett & Kiewitz, 2020). Officers who exhibit higher levels of personal resilience are better equipped to manage difficult situations, leading to a stronger sense of responsibility and work ethic (Pacheco et al., 2019; Miles & Shelton, 2022). Additionally, work ethics are often nurtured in environments where individuals feel empowered and capable of handling challenges, which resilience directly supports.

Problem 7. Is there a significant relationship between the respondents' resiliency quotient and their work commitment?

To arrive at the answer to this problem, the computer r-value and p-value were determined employing Pearson-r, the results of which is reflected in table 8.

Table 8

Summary of Correlation between the Respondents' Resiliency Quotient and Work Commitment (n=89)

Variables	Computed r-value	p-value	Remarks
Resiliency Quotient and Work Commitment	0.453	0.000	Significant

The computed r-value is 0.453 and 0.000 p-value, indicating a moderate significant positive relationship between Resiliency Quotient and Work Commitment. The positive and statistically significant relationship suggests that Resiliency Quotient (which refers to an individual's ability to recover from setbacks and remain focused in the face of disaster) is positively correlated with Work Commitment (the degree of dedication, involvement, and loyalty an employee shows towards their job). Specifically, BDRRM Officers in Nueva Vizcaya who are more resilient tend to demonstrate stronger commitment to their work. This indicates that these officers are likely to stay dedicated and involved in their disaster management responsibilities, even when faced with stressful or challenging situations. In addition, resilience, as a personality trait, helps individuals manage stress and maintain a sense of purpose, which are key to sustaining high levels of commitment in difficult roles like disaster risk reduction management. Resilient individuals are better equipped to handle the demands of the job, thus reinforcing their long-term involvement and loyalty to the mission. For BDRRM Officers, boosting resilience through targeted interventions (e.g., resilience training, stress management programs, mental health support) could enhance work commitment. Officers who are emotionally and psychologically resilient are more likely to remain dedicated to their responsibilities and maintain a sense of duty even during prolonged crisis situations, such as natural disasters or emergency response periods.

Organizational strategies that foster resilience can directly impact the overall effectiveness of disaster management efforts. Officers who feel mentally equipped to handle the challenges of disaster management will likely exhibit a greater willingness to remain committed, stay engaged, and contribute to successful disaster mitigation and response. During a disaster, employees with high resiliency quotients are more likely to stay engaged and committed to their tasks, demonstrating sustained effort, perseverance, and organizational loyalty, even in the face of emotional or physical exhaustion. Research on resilience shows that individuals with higher resiliency tend to be more committed to their work (Cheung et al., 2022; Martin et al., 2019). In occupations like disaster risk management, where uncertainty and stress are inherent, resilient individuals tend to adapt and remain committed to their roles, even in challenging times. Studies have consistently shown that resilience helps individuals develop a stronger sense of professional commitment by enabling them to overcome adversity without disengaging from their responsibilities (Wagner & Zacher, 2021; Zhao et al., 2020).

Problem 8. Is there a significant relationship between the respondents' work ethics and work commitment?

To arrive at the answer to this problem, the computer r-value was determined employing Pearson-r, the results of which is reflected in table 9.

Table 9*Summary of Correlation between Respondents' Work Ethics and Work Commitment (df=87)*

Variables	Computed r-value	p-value	Remarks
Work Ethics and Work Commitment	0.612	0.000	Significant

The computed r-value is 0.612 and 0.000 p-value, indicating a moderate to strong significant positive relationship between Work Ethics and Work Commitment. The positive and statistically significant relationship suggests that strong work ethics are associated with a high level of work commitment. BDRRM Officers in Nueva Vizcaya with high standards of responsibility, accountability, and integrity are more likely to show a high degree of commitment to their work. These officers demonstrate a strong sense of responsibility toward their disaster risk management duties and show high levels of involvement and loyalty to their roles. Moreover, work ethics, which encompass values such as dedication, integrity, professionalism, and accountability, are important to job performance. When these ethical standards are internalized by individuals, they are more likely to be committed to their work, exhibit a positive attitude, and remain engaged in their tasks, even when faced with challenges. For BDRRM Officers, fostering strong work ethics can be a key strategy for increasing work commitment. This can be achieved through ethical training, leadership that models ethical behavior, and promoting a culture of accountability within the organization. Officers who adhere to high standards of professionalism are more likely to stay engaged in their work.

In the context of disaster management, where responsibility and accountability are paramount, officers with strong work ethics will likely stay committed to ensuring the safety and preparedness of their communities. Ensuring that BDRRM Officers uphold ethical standards will likely translate to improved disaster response, preparedness, and overall performance. Studies support the view that work ethics are strongly related to work commitment. Research by Miao et al. (2021) and Brown and Green (2019) shows that individuals with strong ethical standards tend to be more dedicated and committed to their professional responsibilities. These individuals are motivated by a sense of duty and responsibility, which increases their investment in their work and the organization. Furthermore, research indicates that individuals with strong work ethics feel a deeper sense of commitment and responsibility to their job, as they view their role not only as a professional obligation but also as a moral commitment. This aligns with findings from occupational psychology, which highlight that work ethics positively influence organizational commitment, especially in high-stakes fields like disaster risk management (Bashir & Jehanzeb, 2022; Wright et al., 2020).

5. Conclusions

Based on the significant findings, the following conclusions were drawn:

1. The DRRM officials and employees in Nueva Vizcaya have a high level of disaster risk reduction management skills in all the dimensions identified in this study.
2. The respondents are very resilient employees since they are very good at envisioning, are determined, are able to interact well with others, develop and value relationships, are very good at problem solving, well-organized and are self-confident.
3. The respondents observe work ethics very well because they are self-reliant, adhere to moral and ethical standards, use their leisure time wisely, are hardworking, consider their work as the center or focal point of their lives, use their time wisely, and can delay gratification.
4. The respondents are highly committed to their work.
5. The respondents' disaster risk reduction management skills have significant bearing on their work commitment, but not on their resiliency quotient and work ethics.

6. The respondents' resiliency quotient significantly correlates with their work ethics.
7. The respondents' resiliency quotient significantly correlates with their work commitment.
8. The respondents' work ethics and work commitment are significantly correlated.
9. The evolved organization development and planning intervention program may enhance the DRRM officials and employees' disaster risk reduction management skills, resiliency quotient, work ethics, and work commitment that may result to excellent job performance.

Recommendations

1. Barangay disaster risk reduction officials may sustain and further develop their very high level of disaster risk reduction management skills through training programs. These may include advanced workshops on risk assessment, community engagement, and continual learning to keep up with evolving disaster management trends.
2. Given their very good resiliency, officials may participate in programs aimed at further strengthening areas like determination, interaction, and problem-solving. Structured resilience-building activities, such as stress management training or team-based challenges, may enhance their overall adaptability and performance.
3. Officials may continue demonstrating strong work ethics while addressing areas needing improvement, such as leisure management. Programs emphasizing time management, stress reduction, and the balance between work and personal life may help achieve a more holistic work ethic.
4. With a high level of work commitment, officials may benefit from activities that recognize and reward their dedication. Implementing incentive programs and celebrating successes may encourage sustained engagement and motivation among the team.
5. Officials may capitalize on the significant relationship between disaster mitigation skills and work commitment by engaging in collaborative disaster preparedness exercises. Such activities may enhance both their technical capabilities and dedication to their roles.
6. Since resiliency significantly correlates with work ethics, barangay officials may consider integrated programs combining resilience-building strategies with ethical decision-making workshops. This approach may help them become more adaptable while maintaining strong moral standards.
7. The significant relationship between resiliency and work commitment may be further developed through leadership coaching and community-based projects. Activities that encourage both resilience and commitment, such as disaster simulation drills or public service campaigns, may enhance their effectiveness in disaster management.
8. Given the strong correlation between work ethics and work commitment, initiatives that focus on ethical leadership and accountability may be beneficial. Creating mentorship programs or ethics committees may reinforce these traits while promoting teamwork within the organization.
9. An organizational development and planning intervention, such as the proposed seminar, may be conducted to address identified areas for improvement. This seminar may focus on bridging the gaps between disaster mitigation, resiliency, work ethics, and work commitment to foster a more cohesive and effective disaster risk reduction framework.

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