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Mind Over Calamity: Psycho-Cultural Traits and Disaster Preparedness in the Communities of Munai Lanao Del Norte, Philippines

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Abstract

This research study was designed to determine the psycho-cultural traits and level of disaster preparedness of the communities in the Municipality of Munai, Lanao del Norte. The nature of the study was quantitative research utilizing descriptive design specifically cross-sectional survey design. It utilized a survey instrument made by the researchers in obtaining primary data in the selected barangays of Munai, Lanao del Norte. The survey instrument was a structured interview schedule since the data collection was administered through personal interviews. A total of two hundred forty-three (243) respondents were interviewed and used as the primary source of data for this study. As to the psycho-cultural traits, the results revealed that people in the community have positive disposition and outlook in life for indicators on attitudes and sentiments in life had a total weighted mean of 4.34 which is interpreted as agree while faith or beliefs in God, oneself, and others obtained a total weighted mean of 4.6 which is interpreted as strongly agree which means that people in the community have strong faith in God and high confidence in oneself and in others. In terms of Level of Disaster Preparedness, both the Local Government Unit (LGU) and the families/households have a "high level" of disaster preparedness. However, in some aspect on the preparedness of the Local Government Unit have been found out to have "low level" specifically in the aspect of emergency devices and emergency alert system.

Keywords: Psycho-Cultural Traits, Disaster Preparedness, Community

Introduction

Disasters, whether large or small, local or national in scale, remain a concern for of the humanity across the globe. However, it is often the communities at the grassroots—particularly at the barangay level—that suffer the most adverse impacts of disasters. These communities are typically the first to respond, relying on their internal established coping mechanisms and survival strategies long before assistance from external sources such as non-governmental organizations or government agencies arrives. The ability of these communities to withstand and recover from disaster impacts depends heavily on their preparedness, resilience, and underlying psycho-cultural traits that influence their responses to crises.

The United Nations Office for Disaster Risk Reduction (UNDRR) defines a disaster as a serious disruption in the functioning of a community or society, resulting in widespread human, material, economic, or environmental losses that exceed the affected population's capacity to cope using its own resources. These disruptions often manifest in fatalities, injuries, mental health challenges, damage to infrastructure, and long-term socio-economic insecurity (UNDRR, 2023). Globally, the severity of natural hazards—

especially typhoons, floods, and earthquakes—is increasing. Climate change, population growth, poverty, and environmental degradation further intensify the frequency and magnitude of disasters (Kim, Yang, & Torneo, 2022; Hendriks & Opdyke, 2022).

The Philippines is among the most disaster-prone countries in the world due to its geographical location along the Pacific Ring of Fire and the typhoon belt. With more than 7,000 islands and over 36,000 kilometers of coastline, the country faces insistent threats from natural disasters such as typhoons, floods, earthquakes, and landslides (Agub & Turingan, 2017). Moreover, human-induced disasters such as armed conflicts—particularly in conflict-prone areas like Munai, Lanao del Norte and other parts of Southern Philippines—further aggravate vulnerabilities and disrupt communities' peace and order. These overlapping threats emphasize the need for comprehensive disaster preparedness strategies that go beyond physical infrastructure and address the psychological readiness and resilience of individuals and communities.

In the municipality of Munai, communities frequently experience both natural and man-made disasters, including severe flooding during heavy rainfall and the threat of armed conflict due to regional instability. Despite national efforts on disaster risk reduction, these communities continue to face recurring challenges. Understanding the psycho-cultural traits—such as optimism, risk perception, adaptability, and self-efficacy—that influence disaster preparedness can provide vital insights into enhancing resilience at the grassroots level. Thus, this study aims to explore the psycho-cultural traits and the level of disaster preparedness among the communities in Munai, Lanao del Norte, to inform more responsive and context-specific disaster risk reduction strategies.

RESEARCH METHODS

Research Design and Procedures

The study was quantitative research utilizing cross-sectional survey research design. The study employed quantitative approaches to determine the psychological traits and disaster preparedness of communities. Furthermore, the researcher utilized cross-sectional descriptive research instrument being the main tool for data gathering. Cross sectional research method is whereby researchers examine a situation affecting groups at any point in time (Creswell, 2005). The cross-sectional survey method is the most commonly used survey method design to compare to surveys used in longitudinal studies. One reason for this is primarily due to shorter amount of time required in gathering information (Creswell, 2005). A cross-sectional survey is also suitable for use in the current study because it is descriptive nature, and this research is a one-shot point in time survey for the purpose of simply describing the characteristics of a sample at one point in time (Martens, 2005)

The study was conducted in the Municipality of Munai which is one of the twenty-two (22) municipalities of Lanao del Norte. Munai is the oldest Municipality of then undivided Lanao Province. The Municipality of Munai is densely populated with Meranaws who are practicing Islam as religion. The Municipality often experiences heavy rainfall and typhoons that often leads to flooding in some communities in the Municipalities. Subsequently, Munai is located in the boundary of the provinces of Lanao del Norte and Lanao del Sur. It is near the Municipality of Piagapo, Lanao del Sur where 2000 and 2008 insurgencies with the MILF took place and close to Marawi City where the ISIS and Maute groups' attack took place in May 2017. Aside from being one of the biggest commands of MNLF and MILF after 1996, Munai is considered to be strategic as it provides the easiest escapes routes of rebels from Lanao del Sur.

In gathering the data, the researcher secured approval of the conduct of the study from the chief executive of the municipality and from the captains of three (3) barangays of Munai, Lanao del Norte, respectively. The rationale of the study was discussed clearly with the local leaders and with the respondents as well. Hence, informed consent was secured prior to the data collection. The survey method using personal interviews was administered in the selected barangays of the research site in order to generate the needed primary data for this study. The survey instrument was translated into Meranaw dialect because respondents are Meranaws.

Lastly, the data was organized and presented using descriptive statistics specifically weighted mean.

Sample and Sampling Techniques

The samples of the study were taken from the three (3) selected barangays in the Municipality. A total of two hundred forty-three (243) samples were taken from a total of 706 households of the three (3) barangays.

The researcher had preselected the barangays to be part of the study. To come up with the sample needed, the researcher employed Stratified and Random Sampling. For stratified sampling, the researcher got proportionate samples from each identified barangay. After which, the researcher used simple random sampling in the choice of respondents to be included as sample. Simple random sampling because right after getting the proportion samples of each barangay, the researcher randomly selected the respondents. Thus, each of the household heads has the chance to be taken as part of the sample. Shown in Table 1 is the distribution of sample size of each barangay through Stratified Random Sampling.

Table 1. Distribution of Sample Size per Barangay

Barangay	Household Number	Sample Size
Bacayawan	183	$n_1 = \frac{183}{706} * 243 = 63$
Matampay	168	$n_5 = \frac{168}{706} * 243 = 58$
Pendulunan	355	$n_3 = \frac{355}{706} * 243 = 122$
TOTAL	**706**	**243**

N= 706 HHs of the 3 barangays n= 243 households (34.4% of the total HHs)

Research Instrument

The survey instrument was self-made structured interview schedule and pre-tested in some of the Barangays in Madalum, Lanao del Sur especially in the barangays that had experienced disasters to ensure clarity and consistency of response thereby improving on its reliability and validity. In this study, ten (10) respondents were randomly interviewed in the barangays of Madalum, Lanao del Sur. The respondents were asked to reflect on the survey questions and process during and after the survey.

The structured interview schedule was divided into three (3) parts. Part I of the instrument contains questions on the psycho-cultural traits of the respondents; Part II contains the trainings attended by the respondents related to Disaster Risk Reduction and Management; and Part III contains the Level of Disaster Preparedness of the respondents.

RESULTS AND DISCUSSION

Psycho-cultural traits of the Respondents

Table 2 shows the respondents' responses to the statement provided to determine their psycho-cultural traits specifically their attitudes and sentiments in life, faith in God, belief toward self and belief toward others.

Table 2. Distribution of the Respondents' Responses on the Statements Determining their Psycho-cultural Traits

Statement Indicators	Weighted Mean	Verbal Interpretation
Attitudes or Sentiments in Life (both natural and human-induced disasters)	4.63	Strongly Agree
1. The tragedies make me strong to face adversities in life.	4.53	Strongly Agree
2. The properties and livelihood which were lost can be gained in the future.	4.49	Agree
3. The tragedies depressed me a lot.	4.51	Strongly Agree
4. I have thought of a better strategy in life after the landslide and war/rido.	4.46	Agree
5. Flood/Landslide taught us that whatever wrong we have done to our nature, we will suffer the consequences of our wrongdoings.	4.6	Strongly Agree
6. Floods/Landslide due to tropical depression Vinta tells us to take care of our natural environment.	4.6	Strongly Agree
7. Every time there is a rain I feel like landslide/flood is coming.	4.62	Strongly Agree
8. I am becoming nervous when there is news about bad weather.	4.27	Agree
9. The war/rido gave me trauma and anxiety	4.17	Agree
10. I feel anxious every time I hear news about War/ISIS/Rido	4.16	Agree
11. I am disturbed every time I hear gunshots or explosive devices being detonated.	3.21	Undecided
12. I feel uncomfortable because of the presence of military troops in our community.	4.15	Agree
Total	**4.34**	**Agree**
Faith or Beliefs (God, Self and Others)		
1. I have a strong faith and believe in the will of God	4.92	Strongly Agree
2. I prefer to take the lead in problem solving	4.5	Strongly Agree
3. Things happen for a reason	4.58	Strongly Agree
4. I am confident that I can overcome this tragedy.	4.55	Strongly Agree
5. I have a reason to stay alive.	4.6	Strongly Agree
6. I can look for ways to live a life.	4.55	Strongly Agree
7. I am hopeful that I can get back with life again.	4.63	Strongly Agree
8. My family was my strongest refuge.	4.8	Strongly Agree
9. We're glad there was aid given by various organizations.	4.4	Agree
10. I am blessed because Meranaw culture has strong sense of kinship.	4.53	Strongly Agree

11. My relatives were willing to accept us in their respective homes.	4.58	Strongly Agree
12. I am blessed to have supportive neighbors.	4.54	Strongly Agree
Total	**4.6**	**Strongly Agree**
Overall Weighted Mean	**4.47**	**Agree**

The results of the study reveal that the people of Munai, Lanao del Norte exhibit a distinct set of psycho-cultural traits and dispositions that play a crucial role in their response to both natural and human-induced disasters. These traits—particularly those related to their attitudes, sentiments, and beliefs—significantly shape their ability to cope with, adapt to, and recover from traumatic events such as typhoons, landslides, armed conflict, and displacement. The analysis is grounded on two key domains: (1) *Attitudes or Sentiments in Life* and (2) *Faith or Beliefs in God, Self, and Others*.

Attitudes or Sentiments in Life

The overall weighted mean for the domain *Attitudes or Sentiments in Life* is 4.32, interpreted as "Agree." This indicates a generally positive attitude among the respondents toward life, even amid adversity. Based on the itemized mean ratings, the statements that were rated "Strongly Agree" include: (1) "The tragedies make me strong to face adversities in life," (2) "The properties and livelihood which were lost can be gained in the future," (4) "I have thought of a better strategy in life after the landslide and war/rido," (6) "Floods/Landslide due to Tropical Depression Vinta tells us to take care of our natural environment," (7) "Every time there is a rain I feel like landslide/flood is coming," and (8) "I am becoming nervous when there is news about bad weather." Meanwhile, statements such as (3), (5), (9), (10), (11), and (13) were rated as "Agree," and only one item— (12) "I am disturbed every time I hear gunshots or explosive devices being detonated"—was rated as "Undecided."

These findings imply that while the community members experience psychological distress and anxiety, particularly as a result of recurring disasters and armed conflicts, they continue to display a positive and adaptive attitude. The high agreement on statements about personal strength, environmental responsibility, and developing better strategies in life reflects a psychologically resilient mindset. Despite emotional strain, these individuals maintain a sense of hope, learning from tragedy, and preparing more effectively for future events.

Moreover, the data affirm the widely recognized Filipino trait of optimism, even amid tragedy. This cultural characteristic has been observed globally, especially during major disasters in the Philippines. International media and humanitarian organizations have often remarked on the ability of Filipinos to retain a positive disposition in the face of adversity. As what CNN [an international media organization] said after Super Typhoon Yolanda devastated some parts of Visayas in 2013: *"At the end of the day, the Filipinos will just shake off the dirt from their clothes and go about their business….and SMILE. They don't complain much, they will bear as long as they can. The indomitable human spirit at its finest.*" This spirit is clearly reflected in the responses of the people in Munai, who, despite losing homes, livelihoods, and in some cases loved ones, continue to face life with courage, hope, and acceptance.

Nonetheless, the data also reflects latent emotional trauma, especially linked to conflict experiences. Statements that expressed anxiety, nervousness, and trauma from *rido* and armed conflicts—such as hearing gunshots or the presence of military troops—reveal that psychological scars persist, even in communities that outwardly display resilience. This highlights the importance of distinguishing between

surface-level optimism and deeper psychological wellbeing, which must be considered in disaster recovery planning.

Faith or Beliefs in God, Self, and Others

In the second domain, *Faith or Beliefs in God, Self, and Others*, the respondents reported a weighted mean of 4.60, interpreted as "Strongly Agree." This domain garnered the highest overall rating in the study, suggesting that faith and belief systems are central to the community's psychological resilience. All statements under this category were rated "Strongly Agree," except for one item—"We're glad there were aids given by various organizations"—which received an "Agree" rating.

Respondents strongly affirmed their faith in God, their confidence in personal recovery, and their reliance on familial and community support. Items such as "I have a strong faith and believe in the will of God" (M = 4.92), "My family was my strongest refuge" (M = 4.80), and "I am hopeful that I can get back with life again" (M = 4.63) reflect a deep spiritual anchoring, self-efficacy, and strong interpersonal networks that support emotional and psychological recovery. These findings align with the well-documented role of faith and family as protective factors in disaster-prone populations.

Furthermore, the responses reflect the enduring presence of the *bayanihan* spirit—the traditional Filipino value of communal unity and mutual support—particularly evident during times of crisis. During disasters, people not only depend on external aid but also strive to help themselves and one another. This illustrates the collective nature of Filipino resilience, wherein recovery is not only an individual effort but a shared community endeavor.

These results also affirm the findings of Maranda (2012), whose study on survivors of Tropical Storm Sendong revealed that affected individuals coped by reframing the experience positively, viewing their survival as an opportunity to rebuild and strengthen their faith. In the same vein, respondents in this study see their hardships not as ends, but as trials that can be overcome through perseverance, faith, and communal solidarity.

The overall weighted mean of 4.47, interpreted as "Agree," provides a strong indication that the respondents possess a positive psycho-cultural orientation. They demonstrate emotional strength, adaptive coping, and a firm belief in their capacity—and in divine guidance—to navigate life's challenges. Despite the disruptions caused by landslides, flooding, war, and displacement, their attitudes are marked by hope, faith, resilience, and the willingness to move forward.

However, this surface-level positivity must be carefully interpreted. The presence of strong emotions such as anxiety and trauma suggests that psychological resilience does not eliminate the need for mental health intervention. What emerges is a dual reality: the community's strength is undeniable, but so is the presence of unresolved psychological distress. These insights imply that any disaster risk reduction and recovery framework in the region must be holistic—combining infrastructure and logistical support with culturally sensitive, trauma-informed psychosocial interventions.

By leveraging existing cultural strengths such as religious faith, kinship systems, and community cooperation, recovery programs can become more effective and context appropriate. Additionally, environmental education and disaster awareness initiatives can help transform community sentiments into sustainable preparedness strategies. In doing so, the psychological traits of the community become not only a basis for survival but a powerful foundation for resilience-building and long-term development.

Disaster Risk Reduction and Management Trainings Attended

Table 3 shows the distribution of respondents' responses on the training attended regarding Disaster Risk Reduction and Management, year conducted, place conducted and the organizers of the training.

Table 3. Distribution of Respondents' Training Attended Regarding DRRM

Variables	**Frequency**	**Percentage**
Attended a training?	f	%
None	161	66.26
Yes	82	33.74
TOTAL	243	100.0
Titles of the training attended	**f**	**%**
DRRM	68	82.9
Earthquake Drill	25	30.5
Disaster Preparedness	3	3.7
First Aid	1	1.2
Year Training were Conducted	**f**	**%**
2021	1	1.2
2020	1	1.2
2019	49	59.6
2018	33	40.2
2016	4	4.9
2015	2	2.4
Places where trainings were Conducted	**f**	**%**
Within the barangay	88	97.8
Within the municipality	2	2.2
Organizer/Sponsor of the training	**f**	**%**
ECOWEB Inc.	36	43.9
DILG	20	24.4
UNICEF	13	15.9
Action Against Hunger	6	7.1
CFSI	5	7.3
DEPED	2	2.4
MARADECA	1	1.2
LGU	1	1.2

Note: Multiple Responses

The findings of the study reveal a critical gap in disaster risk reduction and management (DRRM) education among residents of Munai, Lanao del Norte. A substantial majority of the respondents—161 individuals, or 66.26%—indicated that they had not attended any formal training related to DRRM. In contrast, only 82 respondents, or 33.74%, reported having participated in any disaster-related training.

This imbalance suggests that a significant portion of the population may lack essential knowledge and skills necessary for effective disaster preparedness, response, and recovery.

Among those who did attend DRRM training, most reported participation in specific events such as earthquake drills, disaster preparedness sessions, and basic first aid trainings. However, a closer examination of the timeline reveals that the majority of these trainings were conducted only after major disasters had already occurred—specifically, following Tropical Depression Vinta in 2017, as well as the all-out wars in 2000 and 2008 and the Marawi Siege in 2017. This reactive approach to training, rather than a proactive one, highlights a major weakness in the community's disaster risk reduction strategy. Although a few training programs were reportedly conducted prior to the flooding and landslides that affected Munai, these were limited and sporadic, thus insufficient in equipping the community with the necessary disaster management competencies.

Moreover, the majority of these training programs were conducted within the barangays and the municipality itself, largely through the efforts of non-governmental organizations and partner institutions such as ECOWEB Inc., DILG, UNICEF, Action Against Hunger, CFSI, MARADECA, and the Department of Education. While this collaboration between government and civil society is commendable, the findings clearly show that the community had minimal exposure to DRRM concepts before disasters occurred, indicating that preparedness efforts were largely post-event rather than embedded in long-term community planning.

These findings carry significant implications for the disaster preparedness and resilience of Munai. The low participation in DRRM training prior to major disasters suggests a critical vulnerability in the community's ability to anticipate, mitigate, and respond effectively to both natural and human-induced hazards. This is particularly concerning given Munai's exposure to multiple disaster risks, including typhoons, landslides, and conflict-related displacement. The reactive nature of training interventions implies that lives, properties, and livelihoods may have been placed at unnecessary risk due to a lack of anticipatory capacity and pre-disaster education.

The implications are supported by numerous studies emphasizing the importance of community-based disaster risk reduction and proactive education. According to Shaw (2012), local-level capacity building through DRRM training is essential for increasing community resilience, as it empowers individuals with knowledge, preparedness skills, and a sense of agency in the face of hazards. Similarly, Benson et al. (2001) argue that disaster education enhances risk perception, improves early warning compliance, and leads to more organized and effective community responses during emergencies.

Therefore, the findings suggest an urgent need for institutionalizing disaster preparedness education at the grassroots level. DRRM concepts must be integrated into the regular activities of schools, barangays, local government units, and civil society organizations. Trainings must not only occur after a disaster but rather become part of a systematic and continuous community preparedness strategy. Furthermore, DRRM education must be inclusive, ensuring that vulnerable groups such as women, children, the elderly, and persons with disabilities are adequately informed and involved in disaster risk planning.

Thus, the data points to a systemic gap in disaster preparedness that must be addressed through sustained, inclusive, and culturally sensitive DRRM capacity-building initiatives. Without such proactive measures, communities like Munai remain at high risk of suffering disproportionate losses during future disasters—not because of the magnitude of the events, but due to a lack of preparation and access to critical knowledge before disaster strikes.

Level of Community Disaster Preparedness as Perceived by the Respondents

Table 4 displays the level of community disaster preparedness as perceived by the respondents. This part is divided into two (2) which is the Preparedness of the Local Government Unit and the Preparedness of the Family/Household.

Table 4. Distribution of Respondents' Responses on Statements Determining their Level of Community Disaster Preparedness.

Statement Indicators	Weighted Mean	Level of Prepredness
Local Government Unit	4.09	High
1. The Barangay Disaster Risk Reduction Management Committee is actively organized in our barangay.	3.96	High
2. The Disaster Risk Reduction Management is a priority program in our barangay.	4.05	High
3. The Disaster Response and Rescue team in our barangay had been prepared for disasters.	2.33	Low
4. Emergency devices were installed in our barangay.	3.9	High
5. The barangay has an evacuation center	3.36	Moderate
6. There is available equipment to use during Response and Rescue	2.46	Low
7. The barangay has an evacuation alert system.	3.96	High
8. There is strong community involvement in sustained public education campaigns at levels of society for disasters of all types.	3.84	High
9. There are awareness raising conducted regarding violent extremism.	3.4	Moderate
10. There are personnel roving 24 hours in the barangay for security and safety.	4.27	High
11. The community people report to the authority whenever there is a presence of unidentified individuals.	4.5	Very High
12. There are exit points in the barangay whenever war occurs.	**3.67**	**High**
Total	4.09	High
Family/Household		
1. Every family member is aware of the hazards in the barangay.	4.37	High
2. Disaster preparedness is discussed in our home	4.2	High
3. Attended meetings dealing with emergency preparedness.	4.12	High
4. Prepared a family emergency plan for all kinds of disasters	4.26	High
5. Prepares emergency kit all the time (water, non-perishable goods, battery-operated radio, whistle, important family documents, first aid kit and others.)	4.25	High
Total	4.24	High
Overall Weighted Mean	**3.96**	**High**

This study sought to examine the level of disaster preparedness at two critical levels: the Local Government Unit (LGU) and the household. The findings revealed that the overall mean weighted rating

of the community's disaster preparedness was 3.96, interpreted as high. This suggests that both the local governance structures and the families in Munai, Lanao del Norte have established essential mechanisms and practices that enhance their resilience to various types of disasters.

Local Government Unit Preparedness

The weighted mean score for the LGU level was 3.67, also interpreted as high. The data revealed that seven (7) indicators were rated high, including:

- Statement 1 (The Barangay Disaster Risk Reduction Management Committee is actively organized),
- Statement 2 (DRRM is a priority program),
- Statement 3 (Disaster response and rescue teams are prepared),
- Statement 5 (Availability of evacuation center),
- Statement 8 (Community involvement in public education campaigns),
- Statement 9 (Awareness-raising on violent extremism), and
- Statement 11 (Community members report unidentified individuals).

Notably, Statement 12—"There are exit points in the barangay whenever war occurs"—received a very high rating, highlighting the strategic advantage of Munai in terms of accessible exit points to nearby municipalities in Lanao del Norte and Lanao del Sur. This infrastructure plays a vital role in ensuring civilian safety during conflict-induced emergencies, further strengthening the community's overall preparedness.

However, critical weaknesses were also evident. Statements 4 (Emergency devices installed) and 7 (Availability of evacuation alert system) received low ratings, while Statements 6 (Available response and rescue equipment) and 10 (24-hour roving personnel) were rated moderate. These lower scores suggest specific deficiencies in technical preparedness and operational resources, which are crucial in ensuring a prompt and effective response to disasters.

Despite these shortcomings, the high rating of other indicators implies that the lacking aspects are being offset by stronger elements of disaster preparedness. The results align with the responsibilities assigned by Section 389 of the Local Government Code of 1991, which mandates that the Punong Barangay, as the chief executive of the barangay, must organize and lead emergency groups during times of calamity. This emphasizes the LGU's role in planning, coordination, and immediate disaster response actions.

Furthermore, the findings underscore the importance of institutional preparedness at the barangay level. As the basic political unit, the barangay is expected to organize its Barangay Disaster Risk Reduction and Management Committee (BDRRMC) to handle both natural and human-induced calamities effectively. The level of organization and prioritization of DRRM efforts in Munai indicates compliance with this legal mandate, although reinforcement in material and operational aspects is necessary.

Household-Level Preparedness

The total mean score for the household-level disaster preparedness was 4.24, also interpreted as high. All five indicators under this component were rated high by respondents. These include:

- Awareness of hazards,
- Discussion of disaster preparedness at home,
- Attendance in emergency meetings,
- Preparation of a family emergency plan,
- Availability of an emergency kit.

This finding illustrates that families in Munai are not only aware of potential hazards but are also actively engaged in preventive and preparatory behaviors. The strong performance in household preparedness can be attributed to national programs like the Department of Interior and Local Government's (DILG) Operation Listo, launched in 2014. A component of this program, the Listong Pamilyang Pilipino, aims to equip Filipino families with the knowledge and tools necessary for effective disaster response and survival. The consistently high ratings of household indicators reflect the success and reach of such government-initiated campaigns.

The overall high preparedness rating indicates that the synergy between the LGU and its constituents is a key driver in enhancing disaster readiness. Although gaps exist in resource availability and emergency infrastructure, these are mitigated to some extent by strong organizational efforts, high public awareness, and community participation.

This collaborative model reflects the multi-level governance approach to disaster risk reduction (DRR), where the local government assumes leadership roles in organizing and responding, while families play proactive roles in household preparedness. The effectiveness of this model is also affirmed by Gillard and Mercer (2012), who argued that local technical know-how, when blended with culturally rooted practices, enhances DRR strategies. Community-based DRR empowers local populations to evaluate risks and implement coping strategies that are both socially acceptable and economically feasible.

The case of Munai exemplifies this principle. The LGU demonstrates institutional commitment, while residents exhibit personal and family-level responsibility, thus reinforcing the resilience of the community. Nevertheless, efforts must continue to strengthen the weakest links—particularly the availability of emergency equipment, rescue training, and early warning systems.

In sum, the findings of this study affirm that Munai, Lanao del Norte possesses a relatively high level of disaster preparedness at both the LGU and household levels. The legal mandates, strategic geography, and active community involvement all contribute to this preparedness. However, preparedness must be dynamic—constantly reviewed, tested, and upgraded. Closing the identified gaps through investment in critical infrastructure, capacity building, and policy implementation will further enhance the community's ability to withstand and recover from disasters.

Disaster Preparedness in Relation to DRRM Trainings

The findings of the study indicate a high level of disaster preparedness among both the Local Government Unit (LGU) and households in the municipality of Munai, Lanao del Norte, with an overall weighted mean of 3.96. This level of preparedness reflects substantial community awareness, established organizational structures, and strong household-level initiatives in disaster planning and response. Specifically, the LGU-level preparedness yielded a mean score of 3.67 (High), while household preparedness recorded a higher mean score of 4.24 (High).

However, a closer examination of the training component reveals a concerning discrepancy between perceived preparedness and actual participation in capacity-building activities. The data shows that 161 respondents, or 66.26%, reported not having attended any DRRM-related training, while only 82 respondents, or 33.74%, indicated participation in such training programs.

This disparity raises critical questions about the sustainability and effectiveness of current disaster preparedness levels. Although the community rates itself as highly prepared, the low training participation rate suggests that much of this preparedness may be based on passive awareness or structural measures, rather than practical, experience-based competence. For example, indicators related to actual response

capability, such as the preparedness of the disaster response team (mean = 2.33, Low) and the availability of equipment during response and rescue operations (mean = 2.46, Low), were significantly lower than other preparedness indicators. These findings align with the assumption that lack of training translates to reduced operational readiness.

Training is widely recognized as a critical factor in enhancing disaster preparedness. According to Paton (2003), training empowers individuals and organizations by equipping them with the necessary knowledge and decision-making skills required during emergencies. Without adequate training, even the most well-structured disaster management plans can fail due to poor execution.

Moreover, the high preparedness scores at the household level—such as preparing emergency kits, developing emergency plans, and discussing disaster preparedness within the family—may reflect strong information campaigns (e.g., DILG's *Operation Listo*). However, these initiatives, while valuable, cannot fully substitute for hands-on training and simulation drills that test actual readiness under pressure.

The implication of this gap is that preparedness based solely on planning or awareness may lead to a false sense of security. Without widespread participation in training, communities' risk being unprepared when real disaster events occur, especially those requiring coordinated rescue, first aid, evacuation, or communication. This could result in delayed response times, increased casualties, and inefficient resource use.

The role of the Barangay Disaster Risk Reduction and Management Committee (BDRRMC) is vital in addressing this gap. As mandated by Section 389 of the Local Government Code of 1991, the Punong Barangay is tasked with organizing and leading emergency response teams and ensuring that the barangay is prepared for both natural and human-induced disasters. To fulfill this mandate effectively, regular and inclusive training programs must be institutionalized at the community level.

These findings support the work of Gillard and Mercer (2012), who argued that technical preparedness must be matched by local knowledge and the active participation of community members through community-based disaster risk reduction (CBDRR). Training not only enhances technical capabilities but also builds confidence, trust, and cooperation among stakeholders.

Psycho-cultural Traits in Relation to Disaster Preparedness

The results show that respondents in Munai exhibit strong positive psycho-cultural traits, with overall weighted means of 4.32 for attitudes and 4.60 for faith and belief systems. These indicators reflect a high degree of emotional resilience, hope, and collective coping mechanisms, which are critical components in fostering a disaster-ready community.

Meanwhile, the overall level of disaster preparedness—both at the Local Government Unit (LGU) and household levels—was also found to be "High" with a total mean rating of 3.96. This suggests that psycho-cultural resilience plays a meaningful role in driving people's proactive behavior, preparedness mindset, and engagement in disaster risk reduction activities.

Resilience and Optimism as Drivers of Preparedness

The high agreement with statements like *"Tragedies make me strong to face adversities in life"* and *"I have thought of a better strategy in life after the landslide and war"* underscores the community's resilience-based mindset. This attitude may explain why households scored high levels of disaster preparedness (Mean = 4.24) despite limited exposure to formal training.

Such resilience is consistent with findings from Bonanno (2004) who argued that psychological resilience—defined as the ability to adapt well in the face of adversity—can significantly determine

whether individuals take precautionary measures and maintain readiness for future crises. Optimistic individuals often perceive risk more realistically and are more willing to engage in preparedness behaviors.

Faith and Social Support as Protective Factors

The domain of faith in God, self, and others emerged as the highest-rated trait (M = 4.60), reflecting a deeply spiritual and interconnected community. Statements like *"My family was my strongest refuge"* and *"I am hopeful I can get back with life again"* highlight how social cohesion and religious faith serve as emotional buffers and motivation for recovery.

This strong communal and spiritual orientation is key in reinforcing collective action—a necessary ingredient in successful disaster risk reduction. According to Norris et al. (2008), communities with higher social capital and shared values are more likely to organize themselves effectively, respond cohesively, and engage in community-wide preparedness efforts.

Latent Anxiety and Need for Integrated Mental Health Support

However, the psycho-cultural data also reveal elements of latent trauma and anxiety, particularly in statements like *"I am becoming nervous when there is news about bad weather"* and *"I am disturbed every time I hear gunshots or explosive devices."* These responses point to ongoing emotional vulnerability, particularly from experiences of conflict and displacement.

Bridging Psycho-cultural Strengths with Preparedness Gaps

Interestingly, although the overall preparedness level is high, specific LGU-level aspects were rated low, such as Statements 4 and 7 (interpreted as "Low") and Statements 6 and 10 (interpreted as "Moderate"). This reveals structural or institutional gaps, particularly in training and planning consistency. However, the community's psycho-cultural strengths—such as their adaptability and spiritual grounding—may be compensating for the formal gaps in training and structural readiness.

Concluding Remarks

The findings of this study underscore the critical interplay between psychol-cultural traits and disaster preparedness in the context of a disaster-prone and conflict-affected community in Munai, Lanao del Norte. Despite the persistent threats of natural calamities such as landslides and floods, compounded by the psychosocial impacts of armed conflict and displacement, both the local government and households demonstrated a commendable level of disaster preparedness. This institutional and familial readiness is strongly supported by the psycho-cultural resilience of the people, as evidenced by their adaptive attitudes, enduring faith, and collective spirit.

The respondents exhibited notably high levels of optimism, faith in divine providence, and trust in their personal and communal capacities to overcome adversity. The domains of "Attitudes or Sentiments in Life" and "Faith or Beliefs in God, Self, and Others" garnered high weighted means, indicating a deeply ingrained psycho-cultural resilience that functions as a protective factor in the face of disasters. The cultural values of *bayanihan*, familial support, and religious devotion appear to be central to the community's coping mechanisms and recovery strategies.

However, the data also reflect underlying emotional strain and psychological trauma, particularly associated with recurring conflict and natural hazards. Feelings of anxiety, fear, and hypervigilance remain present in the community's responses—signs that resilience, while strong, coexists with unresolved distress. This duality highlights the limitations of viewing disaster preparedness through a purely infrastructural or logistical lens.

As such, the study advocates for a holistic disaster risk reduction and management framework—one that integrates not only physical preparedness and policy implementation but also mental health support and culturally-sensitive psychosocial interventions. By recognizing and building upon the community's existing psycho-spiritual strengths, stakeholders can design programs that are not only technically sound but also socially and emotionally responsive.

Therefore, the resilience of the people of Munai lies not only in the readiness of their barangays and households but also in their unwavering hope, deep-seated faith, and enduring solidarity. These psychological traits must be seen not as ancillary, but as fundamental pillars of sustainable disaster preparedness and recovery. Future initiatives in disaster management, therefore, must harness these traits as resources—transforming individual and collective strength into structured, inclusive, and effective resilience-building efforts.

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