



Rising from the Storm: The Resilience and Coping Mechanisms of Typhoon “Tino” Survivors in Cotcot, Liloan, Cebu

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Abstract

This study investigated the lived experiences and coping mechanism styles of the residents at Cotcot, Liloan, Cebu, following the devastation caused by Typhoon “Tino” in November 2025. Specifically, it determined the respondents’ profile in terms of age, sex, marital status, occupation, and educational attainment; explored their experiences during the typhoon; examined their coping mechanisms in terms of problem-focused, emotion-focused, and avoidant coping styles; and tested the significant difference among coping styles. The study employed a descriptive-phenomenological research design utilizing a mixed qualitative-quantitative method. The respondents consisted of 40 selected residents at Cotcot, Liloan, Cebu who experienced Typhoon “Tino”, chosen through purposive sampling. Findings revealed that respondents experienced fear, shock, trauma, and loss during the typhoon yet demonstrated resilience through family solidarity, “bayanihan,” and faith. Quantitative results showed that problem-focused coping obtained the highest average weighted mean, followed by emotion-focused coping, while avoidant coping registered the lowest mean, and statistical analysis revealed a significant difference among the coping styles, leading to the rejection of the null hypothesis. Based on these findings, a localized community action plan was formulated to enhance disaster preparedness, psychosocial support, family- centered evacuation strategies, and cooperative community response to strengthen disaster resilience in Cotcot.

Keywords: Typhoon “Tino,” disaster resilience, coping mechanisms, descriptive-phenomenological design, action plan

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Introduction

The increasing frequency and intensity of tropical cyclones, driven by climate change (Echendu, 2020), have captured global attention in recent years. (Bilgili, 2025), for example, was intensified by rising ocean temperatures and atmospheric warming, leading to stronger storms with greater destructive potential across the Western Pacific (Venegas et al., 2023). This shift in storm patterns highlights the urgent need to understand not only the meteorological aspects of such events but also how affected communities cope, rebuild, and share their survival stories (Olutumise, 2023), especially in areas highly vulnerable to disasters (Bernier et al., 2024). Climate and disaster science research has increasingly documented the profound socio-economic impacts of extreme weather events, such as powerful typhoons (Nhamo et al., 2025).

According to (Ignacio, 2025), comprehensive vulnerability assessments are crucial to mapping how households and communities are affected by storm surges, wind damage, and flooding (Hu et al., 2019). Typhoons like Kalmaegi (locally named Typhoon “Tino”) are part of a larger trend, with the Philippines particularly vulnerable due to its geographic location and climate patterns. In the 2020s, climate change was linked to a nearly doubled risk of intense typhoons striking the Philippines (Baldwin et al., 2023). These storms have disrupted food security (Ndayiragije & Nkunzimana, 2026), livelihoods, and infrastructure, exacerbating the country’s exposure to climatic extremes (Santos, 2025).

In Cebu, Typhoon “Tino” caused widespread flooding and extensive damage, especially in sectors such as agriculture and fishing, which are vital to local economies (Rahman et al., 2025). The disaster exposed gaps in the province’s disaster preparedness and resilience systems (Ndayiragije et al., 2025), underscoring the importance of understanding local experiences beyond what are captured in statistical reports (Galli et al., 2025). These experiences, particularly in rural areas like Cotcot in Liloan, Cebu provide valuable insight into how communities are affected by and respond to such extreme weather events. In Cotcot, residents experienced dramatic flooding (Amandaria et al., 2025), with rising waters forcing families to seek refuge on rooftops and in evacuation centers (Reed et al., 2022). These personal accounts highlight not only physical survival but also the emotional and psychological toll that such disasters inflict on affected communities (Xu et al., 2025). While meteorological and disaster science research has quantified the scale of damage (Darma et al., 2025), there remains a significant gap in qualitative research that captures the human dimension of disaster impacts at the local level (Effiong et al., 2024).

This study aimed to fill that gap by documenting and analyzing the lived experiences of Cotcot residents during and after Typhoon “Tino.” It sought to explore how individuals and families perceived risk, enacted survival strategies, coped with loss, and navigated recovery. This research emphasized the importance of local narratives in understanding the complexities of disaster recovery and resilience. By focusing on personal stories, this study contributes to disaster studies scholarship and provides valuable insights for developing more resilient community policies in the Philippines.

Methodology

Research design

This study employed a convergent parallel mixed-methods research design, integrating both qualitative and quantitative approaches. Specifically, it combined a phenomenological design to explore the lived experiences, personal perceptions, and emotional responses of residents (Alhazmi & Kaufmann, 2022) with a descriptive research design to systematically quantify demographic profiles, preparedness measures, and coping strategies (Kim et al., 2017). This dual approach provides a comprehensive understanding of disaster vulnerability and community resilience without manipulating variables.

Research setting

The study was conducted in Barangay Cotcot, Liloan, Cebu, a coastal and low-lying community highly vulnerable to flooding and strong winds. Located on the eastern seaboard, Cotcot suffered significant damage to residential areas, small businesses, and agricultural lands during Typhoon Tino. The community's established disaster risk reduction structure, strong community ties, and accessible geographic location made it an ideal setting to study localized disaster response and coping mechanisms.

Participants and sampling

A sample of 40 residents (locally referred to as *Cotcotanons*) who directly experienced the onslaught of Typhoon Tino was selected using purposive sampling. To ensure a comprehensive understanding of community coping styles, the sample included individuals across diverse demographics, including variations in age, sex, marital status, occupation, and educational attainment.

Research instrument

Data were gathered using a structured three-part questionnaire adapted from the *Coping Style and Concerns of BSVAWA with Super-typhoon Odette* instrument:

- Part 1: Demographic Profile: Collected closed-ended data on age, sex, marital status, occupation, and educational attainment.
- Part 2: Qualitative Narrative: Provided an open-ended section for respondents to describe their personal survival experiences during the typhoon.
- Part 3: Coping Mechanisms Scale: Assessed post-disaster coping strategies using a 4-point Likert scale: 4 (*Been doing a lot*), 3 (*Been doing a medium amount*), 2 (*Been doing a little bit*), and 1 (*Not doing at all*).

Data collection procedure

The research workflow followed an Input-Process-Output (IPO) framework:

1. Input Phase: Identified the target purposive sample, developed the questionnaires and interview guides, and secured secondary data (government reports).
2. Process Phase: Obtained formal permission from local authorities and school supervisors. Questionnaires were distributed to collect demographic and quantitative coping data, supplemented by field observations and in-depth interviews to capture personal narratives.
3. Output Phase: Aggregated, coded, and prepared the collected raw data for parallel statistical and thematic analysis.

Data analysis

Quantitative data from the 40 respondents were analyzed using SPSS or similar statistical software, employing the following tools:

- Frequency and Percentage: To summarize demographic distribution and categorize the utilization of coping mechanisms (problem-focused, emotion-focused, and avoidant).
- Weighted Mean: To assess the overall usage frequency and perceived effectiveness of specific coping strategies.
- Analysis of Variance (ANOVA): To determine if significant differences existed among the scores of the three distinct coping styles.

For the qualitative data, thematic analysis was applied. This involved transcribing the interviews, generating initial codes, detecting recurring patterns across the datasets, and formulating clearly defined themes that reflect the participants' lived experiences.

Ethical considerations

Strict ethical standards were observed throughout the research process. Prior to data collection, formal ethical clearance was secured from local authorities and school supervisors. Informed consent was obtained from all 40 participants, ensuring that their participation was completely voluntary. To safeguard privacy, strict anonymity and confidentiality were maintained by removing identifying institutional markers and personal indicators during data reporting.

Results and Discussion

This part presents, analyzes, and interprets the data from the study. The study focused on respondents' profiles, experiences during Typhoon Tino, coping mechanism styles, significant differences among these styles, and the proposed local community action plan.

Research Question # 1: What is the demographic profile of the respondents?

Table 1. Demographic Profile of the Respondents

Demographic profile variables	Mode	Frequency
Age	14-23	16
Sex	Female	26
Marital Status	Single	25
Occupation	Unemployed	19
Educational Attainment	College Graduate	15

Table 1 summarizes the demographic profile of the 40 respondents, highlighting age, sex, marital status, occupation, and educational attainment using modal values. The largest group was aged 14-23 (16 respondents), with a majority of female participants (26). Most respondents were single (25), unemployed (19), and had completed college education (15). The data suggests that youth perspectives were strongly represented, as age and gender often influence coping strategies. Younger individuals and females tend to use different coping mechanisms, with women more likely to engage in emotion-focused coping (Powell et al., 2021). The predominance of single respondents may indicate fewer familial responsibilities, relying more on extended family and community support during crises. The high unemployment rate suggests economic vulnerability, potentially affecting resource access and resilience. Additionally, the number of college graduates implies that higher education may foster better coping strategies, as educated individuals often apply problem-solving and proactive mechanisms in stressful situations. The demographic profile suggests that the respondents, primarily young, female, single, and unemployed with higher education, likely experienced and responded to Typhoon “Tino” in ways shaped by these factors. These characteristics influenced their perceptions, coping strategies, and resilience during the disaster.

Research Question # 2: What are the experiences of the residents at Cotcot, Liloan, Cebu during the Typhoon “Tino?”

This section presents the thematic analysis of Cotcotanons' experiences during Typhoon Tino. Through careful examination of qualitative responses, five recurring themes emerged, reflecting the emotional, social, spiritual, and structural dimensions of their disaster experiences: (1) Suddenness and Unpreparedness, (2) Fear, Trauma, and Psychological Distress, (3) Family Solidarity and Survival Priority, (4) Community Cooperation and “Bayanihan,” and (5) Faith, Gratitude, and Hope amid Loss.

Theme 1: Suddenness and Unpreparedness

A key theme in the narratives was the unexpected and rapid rise of floodwaters, which caught many respondents off guard despite previous typhoon experiences. As one respondent stated, “The flood suddenly rose within about 20 minutes, and we really did not expect the water to rise that much” (Respondent #3). Another shared, “We thought it was just normal rain, but within minutes, we were already on the roof” (Respondent #7). Many residents described how their homes were submerged in minutes, and even those who prepared food and water found their efforts insufficient due to the speed and intensity of the flood. This theme highlights the unpredictable nature of flash floods, which overwhelmed existing preparedness measures. Studies have shown that climate change has intensified extreme weather events, making disasters like sudden flooding more frequent and severe. (Wen et al., 2023) noted that climate-driven events increasingly limit communities' ability to respond effectively. Similarly, (Del Prete et al., 2025) highlighted that rising flood risks exacerbate evacuation challenges and vulnerability, especially

in areas with limited adaptive capacity. The findings suggest that improvements in early warning systems, localized risk communication, and community-based disaster drills are essential for faster responses and better preparedness in future calamities.

Theme 2: Fear, Trauma, and Psychological Distress

A dominant theme was the overwhelming fear, panic, and lasting trauma experienced by residents. Many described intense emotional reactions such as trembling from fear and cold, crying while praying, worrying about children and elderly parents, and witnessing dead animals and human casualties. One participant shared, "Fear, shock, and deep sadness filled the moment" (Respondent #5). Another said, "We were trembling from fear and the cold while we were on the roof" (Respondent #9). Several residents recalled how the sight or sound of rainfall, even after the typhoon had passed, triggered distressing memories, causing ongoing emotional reactions like anxiety and helplessness. These responses reflect symptoms of post-traumatic stress and psychological distress. Research by (Nöthling et al., 2024) found that survivors of sudden flooding experienced heightened anxiety and depression, particularly in low-income communities with limited access to support. Similarly, (Lawrance et al., 2022) highlighted that climate-related disasters increase the prevalence of mental health issues, emphasizing the need for targeted mental health interventions in disaster-prone areas. The findings suggest that mental health and psychosocial support (MHPSS) services should be integrated into post-disaster recovery programs, with trauma counseling and community healing activities prioritized alongside physical recovery efforts.

Theme 3: Family Solidarity and Survival as the Primary Priority

A consistent theme across responses was the prioritization of family survival over material possessions. Many respondents shared experiences of carrying children and elderly parents to safety, climbing rooftops, and sacrificing personal safety to ensure their family's well-being. One participant stated, "We made sure that our entire family was safe" (Respondent #2). Another shared, "Life is more important than things that can be replaced" (Respondent #8). Many respondents expressed deep gratitude for their family's survival, even when homes, vehicles, and belongings were lost. This theme highlights the central role of family bonds as a coping mechanism during life-threatening situations. (Guo & Sim, 2025) noted that family resilience was crucial for disaster survival, as emotional support and shared decision-making strengthened adaptive responses. (Prime et al., 2020) emphasized that family connectedness alleviated stress and enhanced coping capacity during crises. The findings suggest that disaster response planning should prioritize family-centered evacuation strategies and support systems, especially for vulnerable members such as children, the elderly, and individuals with disabilities.

Theme 4: Community Cooperation and "Bayanihan" Spirit

Many participants emphasized the strong spirit of cooperation among neighbors. Residents helped each other climb rooftops, evacuate to safer areas, rescue stranded individuals, share food, and provide temporary shelter. One participant shared, "We are very thankful to our neighbors who helped us get to the roof" (Respondent #24). Another stated, "People really helped each other even though it was dangerous" (Respondent #11). Many respondents highlighted how neighbors were the first to offer help, with some even volunteering without obligation, reinforcing the Filipino value of "bayanihan." While some acknowledged support from the private sector and evacuation centers, others expressed frustration over the limited government rescue efforts. This highlights the importance of collective action in strengthening survival capacity. Research by (Chen & Xu, 2025) found that high levels of social capital, including trust and collective efficacy, significantly improved flood resilience and recovery. Similarly, (Curtis et al., 2024) found that

strong neighbor-to-neighbor networks supported rapid recovery and reduced casualties during disasters. The findings suggest that strengthening community-based disaster preparedness and neighborhood response teams is crucial for enhancing collective resilience. Local governments should also collaborate more closely with private organizations for faster rescue and relief efforts.

Theme 5: Faith, Gratitude, and Hope amid Loss

Faith in God was a central coping mechanism for many respondents. Numerous participants mentioned praying during the flood, surrendering their fears to God, and expressing gratitude for survival despite material losses. One participant shared, “We prayed as the water was rising” (Respondent #6), while another said, “We prayed and trusted God to guide us” (Respondent #10). Despite significant losses, many respondents remained hopeful, with one stating, “Even though we lost a lot, we still hoped we could recover” (Respondent #35). Religious coping is widely recognized as a resilience factor during disasters. (Bentzen, 2021) found that crises often lead to increased religious engagement, providing emotional comfort, while (Sinnott et al., 2024) highlighted how faith-based coping helps individuals reinterpret traumatic events, promoting acceptance and psychological stability. This theme suggests that faith-based organizations and spiritual leaders could have played a vital role in post-disaster recovery by offering emotional support and mobilizing the community. The findings reveal that Typhoon “Tino” was not just a physical disaster but also an emotional and social experience for Cotcotanons. Gaps in preparedness, widespread trauma, and the need for mental health services were evident, while strong family bonds, community cooperation, and faith were key protective factors. Future disaster management in Cotcot should focus on improving early warning systems, providing accessible mental health services, supporting family-centered and community-based preparedness programs, and enhancing coordination between government, private sectors, and local communities. In conclusion, while Typhoon “Tino” brought fear, loss, and trauma, it also showcased the resilience, unity, and faith of the Cotcotanon community. With effective governance and disaster risk reduction strategies, these strengths could turn vulnerability into long-term resilience.

Research Question # 3: What is the respondents’ perceived coping mechanism in terms of problem-focused coping styles?

Table 2. Respondents’ Perceived Coping Mechanism in Terms of Problem-Focused Coping Styles

Indicators	Weighted Mean	Interpretation
1. I’ve been concentrating my efforts on doing something about the situation I’m in.	3.78	Been doing a lot
2. I’ve been taking action to make the situation better.	3.58	Been doing a lot
3. I’ve been getting help and advice from other people.	3.60	Been doing a lot
4. I’ve been trying to see it in a different light to seem more positive.	3.48	Been doing a lot
5. I’ve been trying to come up with a strategy about what to do.	3.43	Been doing a lot
6. I’ve been looking for something good in what is happening.	3.43	Been doing a lot
7. I’ve been trying to get advice or help from people about what to do.	3.45	Been doing a lot
8. I’ve been thinking hard about what steps to take.	3.68	Been doing a lot
Average Weighted Mean	3.55	Been doing a lot

Table 8 shows the respondents' perception of their Problem-Focused Coping Styles, with an overall average weighted mean of 3.55, interpreted as “Been Doing a Lot,” indicating active use of problem-focused strategies in stressful situations. The highest mean (3.78) was for “I’ve been concentrating efforts on doing something about the situation,” suggesting strong focus on directly addressing stress. The lowest mean (3.43) was for “I’ve been trying to come up with a strategy about what to do” and “I’ve been looking for something good in what is happening,” both still reflecting consistent use of these coping strategies. The results indicate that respondents applied problem-focused strategies consistently, adopting a proactive, solution-oriented approach rather than avoidance. This is reflected in their emphasis on planning, effort concentration, and seeking advice to manage stress. These findings align with existing research, such as (Freire et al., 2020), which found that university students who used problem-focused strategies like planning and active problem-solving showed stronger self-efficacy and better adaptation to academic stress. Similarly, (Lakew et al., 2025) showed that victims of gender violence who employed problem-focused coping experienced better emotional regulation and overall coping outcomes.

Research Question # 4: What is the respondents’ perceived coping mechanism in terms of emotion-focused coping styles?

Table 3. Respondents’ Perceived Coping Mechanism in Terms of Emotion-Focused Coping Styles

Indicators	Weighted Mean	Interpretation
1. I’ve been getting emotional support from others.	3.40	Been doing a lot
2. I’ve been saying things to let my unpleasant feelings escape.	3.13	Been doing in medium amount
3. I’ve been calming myself.	3.53	Been doing a lot
4. I’ve been getting comfort and understanding from someone.	3.18	Been doing in medium amount
5. I’ve been making jokes about the happenings.	2.40	Been doing a little amount
6. I’ve been accepting the fact that it happened.	3.50	Been doing a lot
7. I’ve been expressing negative feelings.	2.83	Been doing a medium amount
8. I’ve been trying to comfort in my religion or spiritual beliefs.	3.40	Been doing a lot
9. I’ve been praying and meditating	3.62	Been doing a lot
Average Weighted Mean	3.22	Been doing in medium amount

Table 3 shows the respondents’ level of Emotion-Focused Coping Style, with an overall average weighted mean of 3.22, interpreted as “Been Doing a Moderate Amount,” indicating moderate engagement in emotion-focused strategies. The highest mean (3.62) was for “I’ve been praying or meditating,” suggesting frequent reliance on spiritual practices, while the lowest mean (2.40) was for “I’ve been making jokes about the happenings,” indicating humor was the least used emotion-focused coping strategy. The results indicate a preference for adaptive, internally oriented coping strategies, such as prayer, acceptance, and self-calming, rather than external expressions like humor or venting. This suggests that when stressors were perceived as unchangeable, participants favored emotional regulation and finding meaning. Related studies by

(Ding et al., 2021a) and (Jang et al., 2019) support these findings, highlighting how adaptive emotion-focused coping can reduce psychological distress and maintain well-being in stressful situations. Overall, the data suggest that respondents tended to use emotion-focused coping strategies that emphasize emotional adjustment, acceptance, and social support, reflecting cultural or personal values related to stress management. These findings align with broader research indicating that adaptive emotion-focused coping can improve emotional well-being and reduce psychological distress.

Research Question # 5: What is the respondents' perceived coping mechanism in terms of avoidant-focused coping styles?

Table 4. Respondents' Perceived Coping Mechanism in Terms of Avoidant-Focused Coping Styles

Indicators	Weighted Mean	Interpretation
1. I've been turning to work or other activities to take my mind off things.	3.50	Been doing a lot
2. I've been saying to myself that this is not real.	2.78	Been doing a little bit
3. I've been doing my hobbies to make myself better.	3.43	Been doing a lot
4. I've been refusing to believe that it has happened	2.93	Been doing in medium amount
5. I've been doing something to think about less such as going to watch TV, daydreaming, sleeping or shopping.	2.93	Been doing in medium amount
6. I've been talking to others instead of thinking of what happened.	3.20	Been doing in medium amount
Average Weighted Mean	3.13	Been doing in medium amount

Table 4 shows the respondents' level of Avoidant-Focused Coping, with an overall average weighted mean of 3.13, interpreted as "Been Doing a Medium Amount," indicating that respondents sometimes used avoidant strategies to cope with stress. The highest mean (3.50) was for "I've been turning to work or other activities to take my mind off things," while the lowest mean (2.78) was for "I've been saying to myself 'this is not real,'" indicating that denial was the least utilized avoidant coping strategy. The findings suggest that respondents primarily used distractive behaviors, such as engaging in work or hobbies, to manage stress rather than completely ignoring the problem. This pattern aligns with previous research indicating that avoidant coping can offer short-term relief but may not be effective for long-term adjustment. Studies by (Nahlén Bose et al., 2016) and (Bottomley & Neimeyer, 2025) suggest that while avoidant coping provides immediate emotional relief, over-reliance on it can lead to increased anxiety and depression over time. Overall, the data imply that respondents used avoidant coping moderately, balancing it with other strategies, such as problem-focused and emotion-focused coping. This flexible approach likely contributed to a more adaptive coping style, as avoidant behaviors can offer temporary relief when integrated with strategies that address emotional and cognitive stress.

Research Question # 6: Is there a significant difference between the coping mechanism styles?

Table 5. Significant Difference between the Coping Mechanism Styles
SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Problem-Focused	40.00	142.00	3.55	0.16
Emotion-Focused	40.00	128.78	3.22	0.15
Avoidant-Focused	40.00	125.00	3.13	0.27

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	3.98	2.00	1.99	10.26	0.00	3.07
Within Groups	22.72	117.00	0.19			
Total	26.71	119.00				

Table 12 showed that the three coping styles—problem-focused (mean = 3.55), emotion-focused (mean = 3.22), and avoidant-focused (mean = 3.13)—were significantly different. The ANOVA results yielded an F-value of 10.26 with a p-value of 0.00, indicating that the differences among the coping styles were statistically significant. This suggests that respondents employed these coping styles at varying degrees. The higher mean for problem-focused coping indicates that respondents were more likely to actively address stress through planning and problem-solving, while emotion-focused and avoidant coping styles were less frequently used. This aligns with research showing that problem-focused and adaptive emotion-focused coping are associated with better psychological outcomes (Ding et al., 2021b). The results suggest that respondents preferred problem-focused coping over emotion-focused and avoidant strategies, reflecting a tendency to confront stressors directly (Veisi et al., 2024). This pattern is consistent with the literature, which links active problem-solving to better adjustment and lower distress. The relatively low use of avoidant coping supports findings that excessive avoidance correlates with negative psychological outcomes. These differences highlight the need for targeted interventions that emphasize problem-focused coping, while also recognizing when emotion regulation strategies are more appropriate.

Conclusion

The study on Typhoon “Tino” in Barangay Cotcot, Liloan, Cebu, was initiated against the backdrop of increasing climate vulnerabilities along the eastern seaboard of the Philippines, aiming to comprehensively explore the survival experiences, impacts, and coping mechanisms of the affected residents. Utilizing a descriptive-phenomenological mixed-methods design, the findings revealed that Typhoon “Tino” significantly strained the emotional, social, and physical well-being of the Cotcotanons. Quantitatively, the analysis of variance (ANOVA) confirmed significant differences among the coping styles utilized, proving that the respondents relied heavily and effectively on problem-focused coping strategies over avoidant ones. Qualitatively, the narratives highlight that disaster survival was profoundly sustained by early preparedness, family solidarity, community cooperation, and deep spiritual faith. In conclusion, while the typhoon exposed severe physical and psychological vulnerabilities within the coastal community, it simultaneously demonstrated the robust adaptive capacities and resilience of the residents when supported by strong communal ties. The practical implications of these findings underscore the necessity of a comprehensive action plan focused on enhancing localized disaster readiness, integrating mental health support into evacuation protocols, implementing family-centered evacuation strategies, and strengthening grassroots cooperation for sustainable post-disaster

recovery. However, this study is subject to certain limitations, particularly its small sample size of 40 purposively selected residents within a single barangay, which limits the statistical generalizability of the data to larger or geographically diverse populations, alongside the potential for recall bias inherent in retrospective self-reporting. To build upon these insights, future research should implement longitudinal designs to track long-term psychosocial recovery, conduct comparative studies across different geographical topologies, and examine the specific role of digital communication networks in modern community-led disaster response.

Conflicts of Interest

The authors declare no conflict of interest.

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Author contribution

Melbert Cagang Suplaag and Clarise Mae Pasco Sequerra: Conceptualization, Methodology, Software, Data curation; Hannyshe Vasquez Lagroma: Writing-original draft preparation, Visualization; Angel Luchavez Boreta and Jhesell Sasing Bughao: Investigation, Supervision, Software, Validation, Writing-reviewing, and editing.

Declaration of generative AI in scientific writing

During the preparation of this work, the author(s) used Google translate in order to improve language and readability. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

References:

- Alhazmi, A. A., & Kaufmann, A. (2022). Phenomenological Qualitative Methods Applied to the Analysis of Cross-Cultural Experience in Novel Educational Social Contexts. *Frontiers in Psychology*, 13, 785134. <https://doi.org/10.3389/fpsyg.2022.785134>
- Amandaria, R., Darma, R., Zain, M. M., Fudjaja, L., Wahda, M. A., Kamarulzaman, N. H., Bakheet Ali, H., & Akzar, R. (2025). Sustainable Resilience in Flood-Prone Rice Farming: Adaptive Strategies and Risk-Sharing Around Tempe Lake, Indonesia. *Sustainability*, 17(6), 2456. <https://doi.org/10.3390/su17062456>
- Baldwin, J. W., Lee, C.-Y., Walsh, B. J., Camargo, S. J., & Sobel, A. H. (2023). Vulnerability in a Tropical Cyclone Risk Model: Philippines Case Study. *Weather, Climate, and Society*, 15(3), 503–523. <https://doi.org/10.1175/WCAS-D-22-0049.1>
- Bentzen, J. S. (2021). In crisis, we pray: Religiosity and the COVID-19 pandemic. *Journal of Economic Behavior & Organization*, 192, 541–583. <https://doi.org/10.1016/j.jebo.2021.10.014>
- Bernier, N. B., Hemer, M., Mori, N., Appendini, C. M., Breivik, O., De Camargo, R., Casas-Prat, M., Duong, T. M., Haigh, I. D., Howard, T., Hernaman, V., Huizy, O., Irish, J. L., Kirezci, E., Kohno, N., Lee, J.-W., McInnes, K. L., Meyer, E. M. I., Marcos, M., ... Zhang, Y. J. (2024). Storm surges and extreme sea levels: Review, establishment of model

- intercomparison and coordination of surge climate projection efforts (SurgeMIP). *Weather and Climate Extremes*, 45, 100689. <https://doi.org/10.1016/j.wace.2024.100689>
- Bilgili, M. (2025). Trend in global ocean heat content into different depth layers from 1940 to 2050. *Natural Hazards*, 121(10), 12215–12242. <https://doi.org/10.1007/s11069-025-07278-0>
- Bottomley, J. S., & Neimeyer, R. A. (2025). Avoidant and Approach-Oriented Coping Strategies, Meaning Making, and Mental Health Among Adults Bereaved by Suicide and Fatal Overdose: A Prospective Path Analysis. *Behavioral Sciences*, 15(5), 671. <https://doi.org/10.3390/bs15050671>
- Chen, F., & Xu, H. (2025). Social learning for disaster-resilient urban destinations: Dual-path knowledge co-production and bridging organizations. *Tourism Geographies*, 27(6), 1232–1257. <https://doi.org/10.1080/14616688.2025.2546536>
- Curtis, A. G., Allred, S. B., Murphy Esq, R. C., & Roberts, B. A. (2024). Exploring the role of social capital in community flood resiliency in Binghamton, NY. *International Journal of Disaster Risk Reduction*, 104, 104322. <https://doi.org/10.1016/j.ijdrr.2024.104322>
- Darma, R., Rahmadanih, R., Zain, M. M., Amandaria, R., Mario, M., & Akzar, R. (2025). Resilient Rice Farming: Household Strategies for Coping with Recurrent Floods in Tempe Lake, Indonesia. *Societies*, 15(5), 129. <https://doi.org/10.3390/soc15050129>
- Del Prete, C., Valente, M., Mitiku Saji, A., Khorram-Manesh, A., & Ragazzoni, L. (2025). Understanding vulnerability to flood-induced disasters: A comprehensive scoping review on at-risk individuals and evacuation challenges. *BMC Health Services Research*, 26(1), 171. <https://doi.org/10.1186/s12913-025-13898-w>
- Ding, Y., Fu, X., Liu, R., Hwang, J., Hong, W., & Wang, J. (2021a). The Impact of Different Coping Styles on Psychological Distress during the COVID-19: The Mediating Role of Perceived Stress. *International Journal of Environmental Research and Public Health*, 18(20), 10947. <https://doi.org/10.3390/ijerph182010947>
- Ding, Y., Fu, X., Liu, R., Hwang, J., Hong, W., & Wang, J. (2021b). The Impact of Different Coping Styles on Psychological Distress during the COVID-19: The Mediating Role of Perceived Stress. *International Journal of Environmental Research and Public Health*, 18(20), 10947. <https://doi.org/10.3390/ijerph182010947>
- Echendu, A. J. (2020). The impact of flooding on Nigeria's sustainable development goals (SDGs). *Ecosystem Health and Sustainability*, 6(1), 1791735. <https://doi.org/10.1080/20964129.2020.1791735>
- Effiong, C. J., Musa Wakawa Zanna, J., Hannah, D., & Sugden, F. (2024). Exploring loss and damage from climate change and global perspectives that influence response mechanism in vulnerable communities. *Sustainable Environment*, 10(1), 2299549. <https://doi.org/10.1080/27658511.2023.2299549>
- Freire, C., Ferradás, M. D. M., Regueiro, B., Rodríguez, S., Valle, A., & Núñez, J. C. (2020). Coping Strategies and Self-Efficacy in University Students: A Person-Centered Approach. *Frontiers in Psychology*, 11, 841. <https://doi.org/10.3389/fpsyg.2020.00841>
- Galli, N., Govoni, C., & Rulli, M. C. (2025). Assessing the impact of hydrological extremes on food security from post-disaster reporting. *Global Food Security*, 47, 100889. <https://doi.org/10.1016/j.gfs.2025.100889>
- Guo, C., & Sim, T. (2025). Walsh Family Resilience Questionnaire Short Version (WFRQ-9): Development and Initial Validation for Disaster Scenarios. *Disaster Medicine and Public Health Preparedness*, 19, e39. <https://doi.org/10.1017/dmp.2024.348>
- Hu, X., Pant, R., Hall, J. W., Surminski, S., & Huang, J. (2019). Multi-Scale Assessment of the Economic Impacts of Flooding: Evidence from Firm to Macro-Level Analysis in the

- Chinese Manufacturing Sector. *Sustainability*, 11(7), 1933. <https://doi.org/10.3390/su11071933>
- Ignacio, J. A. F. (2025). Mapping and Assessing High-Resolution Typhoon Exposure and Vulnerability in the Philippines: A Scoping Review. *Journal of Management for Global Sustainability*, 12(2). <https://doi.org/10.13185/2244-6893.1260>
- Jang, M. H., Gu, S. Y., & Jeong, Y. M. (2019). Role of Coping Styles in the Relationship Between Nurses' Work Stress and Well-Being Across Career. *Journal of Nursing Scholarship*, 51(6), 699–707. <https://doi.org/10.1111/jnu.12523>
- Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of Qualitative Descriptive Studies: A Systematic Review. *Research in Nursing & Health*, 40(1), 23–42. <https://doi.org/10.1002/nur.21768>
- Lakew, F. T., Disassa, G. A., & Kebelo, K. K. (2025). Gender-Based Violence Prevalence, Psychosocial Effects, and Coping Mechanisms Among Refugee Women in Kebribeyah Camp, Ethiopia: Baseline for Interventions to Prevent Psychosocial Challenges. *Social Sciences*, 14(12), 721. <https://doi.org/10.3390/socsci14120721>
- Lawrance, E. L., Thompson, R., Newberry Le Vay, J., Page, L., & Jennings, N. (2022). The Impact of Climate Change on Mental Health and Emotional Wellbeing: A Narrative Review of Current Evidence, and its Implications. *International Review of Psychiatry*, 34(5), 443–498. <https://doi.org/10.1080/09540261.2022.2128725>
- Nahlén Bose, C., Elfström, M. L., Björling, G., Persson, H., & Saboonchi, F. (2016). Patterns and the mediating role of avoidant coping style and illness perception on anxiety and depression in patients with chronic heart failure. *Scandinavian Journal of Caring Sciences*, 30(4), 704–713. <https://doi.org/10.1111/scs.12297>
- Ndayiragije, J. M., Fang, H., Abiduhaye, N., Nduwimana, L., Mbonihankuye, S., Shi, M., Li, Y., & Liu, N. (2025). Exploring socio environmental benefits of floodwater utilization in a changing climate world. *iScience*, 28(11), 113646. <https://doi.org/10.1016/j.isci.2025.113646>
- Ndayiragije, J. M., & Nkuzimana, A. (2026). Overviewing the influencing factors of flash floods and assessing their impacts on human life with a focus on Burundi, mitigation measures. *Next Sustainability*, 7, 100249. <https://doi.org/10.1016/j.nxsust.2026.100249>
- Nhamo, G., Chapungu, L., & Mutanda, G. W. (2025). Trends and impacts of climate-induced extreme weather events in South Africa (1920–2023). *Environmental Development*, 55, 101183. <https://doi.org/10.1016/j.envdev.2025.101183>
- Nöthling, J., Gibbs, A., Washington, L., Gigaba, S. G., Willan, S., Abrahams, N., & Jewkes, R. (2024). Change in emotional distress, anxiety, depression and PTSD from pre- to post-flood exposure in women residing in low-income settings in South Africa. *Archives of Women's Mental Health*, 27(2), 201–218. <https://doi.org/10.1007/s00737-023-01384-3>
- Olutumise, A. I. (2023). Impact of relaxing flood policy interventions on fish production: Lessons from earthen pond-based farmers in Southwest Nigeria. *Aquaculture International*, 31(4), 1855–1878. <https://doi.org/10.1007/s10499-023-01062-2>
- Powell, T., Wegmann, K. M., & Backode, E. (2021). Coping and Post-Traumatic Stress in Children and Adolescents after an Acute Onset Disaster: A Systematic Review. *International Journal of Environmental Research and Public Health*, 18(9), 4865. <https://doi.org/10.3390/ijerph18094865>
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, 75(5), 631–643. <https://doi.org/10.1037/amp0000660>
- Rahman, M. C., Sarkar, M. A. R., Kabir, Md. J., Rahaman, Md. S., Biswas, J. C., Aziz, Md. A., Islam, M. A., Al Mamun, Md. A., Rahman, N. Md. F., & McKenzie, A. M. (2025).

- Vulnerability and adaptation in flood-prone ecosystems of Bangladesh: A case study of rice farming households. *Discover Sustainability*, 6(1), 55. <https://doi.org/10.1007/s43621-025-00848-z>
- Reed, C., Anderson, W., Kruczkiewicz, A., Nakamura, J., Gallo, D., Seager, R., & McDermid, S. S. (2022). The impact of flooding on food security across Africa. *Proceedings of the National Academy of Sciences*, 119(43), e2119399119. <https://doi.org/10.1073/pnas.2119399119>
- Santos, G. (2025). Typhoon Odette (Rai): Rapid intensification, devastation, and lessons for resilient recovery in the Philippines. *Tropical Cyclone Research and Review*, 14(4), 514–529. <https://doi.org/10.1016/j.tcr.2025.11.003>
- Sinnott, S. M., Park, C. L., George, J. R., Gnall, K. E., & David, A. B. (2024). Use of religious and spiritual responses after trauma to prevent posttraumatic stress symptoms and suicidality: The role of meaning in life. *Clinical Psychology & Psychotherapy*, 31(1), e2902. <https://doi.org/10.1002/cpp.2902>
- Veisi, R., Kakabaraee, K., Chehri, A., & Arefi, M. (2024). Relationship between coping styles (problem-oriented, emotion-oriented, and avoidance-oriented) with psychological well-being in people with coronavirus-2019 experience in Kermanshah city. *Journal of Education and Health Promotion*, 13(1). https://doi.org/10.4103/jehp.jehp_1543_22
- Venegas, R. M., Acevedo, J., & Treml, E. A. (2023). Three decades of ocean warming impacts on marine ecosystems: A review and perspective. *Deep Sea Research Part II: Topical Studies in Oceanography*, 212, 105318. <https://doi.org/10.1016/j.dsr2.2023.105318>
- Wen, J., Wan, C., Ye, Q., Yan, J., & Li, W. (2023). Disaster Risk Reduction, Climate Change Adaptation and Their Linkages with Sustainable Development over the Past 30 Years: A Review. *International Journal of Disaster Risk Science*, 14(1), 1–13. <https://doi.org/10.1007/s13753-023-00472-3>
- Xu, Y., Sirianni, H., Wade, E., Hoover, F.-A., Mukherji, A., & Narayan, S. (2025). A global systematic review of socio-economic impact assessments of high-tide flooding. *Frontiers in Human Dynamics*, 7, 1644814. <https://doi.org/10.3389/fhumd.2025.1644814>