

Adversity Quotient and Disaster and Health Emergency Response Management Competence of Community Nurses: Basis for a Contextualized Emergency Response Management Plan

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ABSTRACT

Community nurses are central to disaster risk reduction and health emergency management, yet effective performance requires both technical competence and the capacity to function under adversity. Objective: This study examined the adversity quotient and disaster and health emergency response management competence of community nurses in Northern Samar, identified profile characteristics associated with adversity quotient, determined the relationship between adversity quotient and emergency response competence, and developed a contextualized management plan. Methods: A cross-sectional descriptive-correlational design was used. A stratified sample of 133 community nurses from 26 participating municipal health offices and rural health units completed a validated structured questionnaire. The adversity quotient and emergency response competence scales demonstrated acceptable internal consistency (Cronbach's $\alpha = .78$ and $.87$, respectively). Data were analyzed using frequency, percentage, mean, standard deviation, Pearson correlation, point-biserial correlation, Spearman rank correlation, and one-way analysis of variance, with $\alpha = .05$. The respondents reported a very high adversity quotient ($M = 4.27$, $SD = 0.71$) and high disaster and health emergency response management competence ($M = 4.08$, $SD = 0.72$). Ownership was the highest-rated adversity quotient dimension, whereas control was the lowest. Prevention and mitigation was the highest-rated competence domain, whereas response was the lowest. Adversity quotient was significantly associated with age, educational attainment, emergency-response roles, relevant experience, and number of trainings attended. It was not significantly associated with gender, civil status, employment status, or current position. Adversity quotient was moderately and positively correlated with emergency response competence ($r = .587$, $p < .001$). Community nurses demonstrated strong resilience and generally high emergency management competence; however, targeted development is warranted in perceived control, operational response, psychological first aid, mental health referral, documentation, and inter-agency coordination. The proposed contextualized plan integrates resilience-building, competency-based training, simulation, mentoring, and performance monitoring.

Keywords: adversity quotient; community nurses; disaster response competence; emergency response management; health emergency preparedness

INTRODUCTION

Disasters and health emergencies continue to test the capacity, continuity, and resilience of health systems. The World Health Organization's Health Emergency and Disaster Risk Management framework emphasizes prevention, preparedness, readiness, response, recovery, and multisectoral coordination as interdependent functions required to reduce health risks and protect affected populations (World Health Organization [WHO], 2019). This imperative is particularly relevant in the Philippines, which again ranked first in the 2025 WorldRiskIndex because of its high exposure and vulnerability to extreme natural events and climate-related hazards (Bündnis Entwicklung Hilft & Institute for International Law of Peace and Armed Conflict [IFHV], 2025). Nationally, Republic Act No. 10121 mandates an all-hazards, comprehensive, inter-agency, and community-based disaster risk reduction and management system (Republic Act No. 10121, 2010).

Community nurses occupy a strategic position across the emergency management cycle. Their responsibilities may include community risk communication, disease surveillance, vaccination and outbreak response, triage support, referral, continuity of essential services, psychosocial support, and post-disaster recovery. The International Council of Nurses (ICN, 2019) identifies preparation and planning, communication, incident management, safety and security, assessment, intervention, recovery, and law and ethics as key domains of disaster nursing competence. Despite this broad mandate, systematic reviews indicate persistent gaps in nurses' disaster knowledge, practical skills, confidence, and psychological preparedness, particularly in high-risk countries (Labrague et al., 2018; Labrague & Hammad, 2024; Said & Chiang, 2020).

Operational competence alone may not be sufficient in settings characterized by uncertainty, resource constraints, emotional strain, and rapidly changing priorities. Community nurses must also maintain composure, make timely decisions, accept responsibility, contain the impact of adversity, and persist until essential services are restored. Stoltz (1997) conceptualized adversity quotient through four dimensions—control, ownership, reach, and endurance (CORE). These dimensions represent perceived influence over difficult events, accountability for constructive action, the ability to prevent adversity from affecting unrelated areas of functioning, and the expectation that hardship can be endured and resolved. Although adversity quotient is conceptually distinct from psychological resilience, both constructs describe adaptive functioning under pressure.

Emerging nursing evidence supports the relevance of psychological resilience to disaster competence. Nurses' disaster core competencies have been positively associated with resilience, while training and experience have repeatedly been linked with stronger disaster preparedness (Alan et al., 2022; Labrague & Hammad, 2024). Psychological first aid and psychosocial response remain important development priorities because nurses may be expected to support distressed individuals and families while simultaneously managing their own emotional demands (Kılıç Bayageldi & Kaloğlu Binici, 2024; Said et al., 2022).

Research on disaster nursing has largely focused on hospital nurses, emergency personnel, or nursing students. Fewer studies have examined community nurses who operate at the interface of households, barangays, local government units, and referral facilities. Moreover, the combined examination of adversity quotient and disaster and health emergency response management competence remains limited. Evidence from geographically dispersed and disaster-prone provinces is needed to guide locally relevant workforce development. Accordingly, this study assessed the adversity quotient and disaster and health emergency response management competence of community nurses in Northern Samar, examined the profile factors associated with adversity quotient, determined the relationship between adversity quotient and competence, and used the findings to formulate a Contextualized Emergency Response Management Plan.

METHODS

Research Design

This study used a cross-sectional descriptive-correlational design. The descriptive component characterized the respondents' profile, adversity quotient, and disaster and health emergency response management competence. The correlational component examined associations between selected profile variables and adversity quotient and assessed the relationship between adversity quotient and emergency response competence. This design was appropriate because the study measured naturally occurring variables at one point in time without manipulating the respondents' work environment (Aggarwal & Ranganathan, 2019).

Research Locale

The study was conducted among community nurses assigned in 26 participating municipal health offices/health units across Northern Samar Province during the second quarter of 2026. The province was considered an appropriate locale because community nurses are involved in primary health care delivery and health emergency-related functions, including health education, risk communication, disease surveillance, referral coordination, vaccination and outbreak response, triage support, psychosocial assistance, and post-disaster public health

recovery. These roles are consistent with the broad responsibilities of nurses across the disaster and health emergency management cycle (International Council of Nurses [ICN], 2019; WHO, 2019).

Respondents of the Study

The respondents were 133 registered nurses actively engaged in community-based health services and health emergency-related functions. They included Department of Health Community Health Nurses, Nurse I and Nurse II personnel, and local government unit nurses. Eligible participants were registered nurses assigned to community or public health settings within the study locale, were actively deployed during data collection, and voluntarily consented to participate. Nurses who were not assigned to community-based services, were on extended leave, or declined participation were excluded.

Sampling Technique

Stratified sampling was used to obtain representation across participating municipalities and nursing positions or designations. Eligible nurses were grouped by municipality and position category, after which respondents were selected proportionately from the identified strata. Stratification was used to reduce the risk that nurses from larger municipalities or dominant position groups would disproportionately shape the sample (Parsons, 2014).

Research Instrument

Data were collected using a structured questionnaire composed of three sections. The first section measured personal and professional characteristics, including age, gender, civil status, educational attainment, employment status, current position or designation, roles in health emergency response, relevant experience, and number of disaster and emergency response trainings attended. The second section assessed adversity quotient across the CORE dimensions of control, ownership, reach, and endurance (Stoltz, 1997). The third section assessed disaster and health emergency response management competence in prevention and mitigation, preparedness, response, and recovery and rehabilitation, consistent with Philippine disaster risk reduction policy and the WHO Health EDRM framework (Republic Act No. 10121, 2010; WHO, 2019). Items were rated on a five-point Likert scale: 4.21–5.00, very high; 3.41–4.20, high; 2.61–3.40, moderate; 1.81–2.60, low; and 1.00–1.80, very low.

Validity and Reliability of the Instrument

Three experts in nursing education, public health nursing, disaster risk reduction and management, and research reviewed the instrument for clarity, relevance, content adequacy, appropriateness of indicators, and alignment with the objectives. Their recommendations were incorporated before pilot testing. The revised instrument was pilot-tested among 30 nurses outside the study setting. Cronbach's alpha was .78 for the adversity quotient scale and .87 for the disaster and health emergency response management competence scale, indicating acceptable internal consistency for the study.

Data Gathering Procedure

Administrative approval was secured from the concerned provincial and municipal health authorities before data collection. Prospective participants received information about the purpose of the study, expected participation, voluntary nature of involvement, right to decline or withdraw without penalty, and measures for confidentiality. Informed consent was obtained before questionnaire administration. No personally identifying information was presented in the results, and research records were stored securely and accessed only for authorized research purposes.

Data Analysis

Frequency and percentage summarized categorical profile variables. Means, standard deviations, ranks, and verbal interpretations described the adversity quotient and emergency response competence scores. Pearson correlation was used for associations between continuous variables, point-biserial correlation for a binary profile variable, Spearman rank correlation for ordinal educational attainment, and one-way analysis of variance for

profile variables with more than two categories. Pearson correlation assessed the relationship between overall adversity quotient and overall emergency response competence. Statistical significance was evaluated at $\alpha = .05$. Because multiple bivariate tests were conducted, profile associations were interpreted as exploratory and non-causal.

RESULTS AND DISCUSSION

Profile of the Community Nurses

Table 1 summarizes the dominant personal and professional characteristics of the 133 community nurses. The largest age group was 37–43 years. Most respondents were female, married, bachelor's degree holders, contractual employees, and designated as Department of Health Community Health Nurses. More than half reported 6–10 years of relevant experience and three to five disaster and emergency response trainings. Health education and risk communication was the most frequently reported emergency-response role.

Table 1 Profile Characteristics of Community Nurses (N = 133)

Profile variable	Dominant category	n	%
Age	37–43 years	57	42.86
Gender	Female	109	81.95
Civil status	Married	72	54.14
Highest educational attainment	Bachelor's degree	123	92.48
Employment status	Contractual	91	68.42
Current position/designation	DOH Community Health Nurse	73	54.89
Role in health emergency response	Health education and risk communication	116	87.22
Years of relevant experience	6–10 years	75	56.39
Number of trainings attended	3–5 trainings	73	54.89

Note. The table presents the modal or dominant category for each characteristic; complete category distributions should be retained in the study database and may be provided as supplementary material if required by the target journal.

Level of Adversity Quotient of Community Nurses

Community nurses reported a very high overall adversity quotient ($M = 4.27$, $SD = 0.71$). Ownership ranked first, followed by endurance, reach, and control. Although control remained high, it was the lowest-rated dimension, indicating a comparatively greater need to strengthen perceived influence, composure, and decisional confidence during unpredictable events.

Table 2 Adversity Quotient of Community Nurses

Dimension	M	SD	Interpretation	Rank
Control	4.16	0.72	High	4
Ownership	4.35	0.75	Very high	1
Reach	4.25	0.69	Very high	3
Endurance	4.33	0.66	Very high	2
Overall	4.27	0.71	Very high	—

Level of Disaster and Health Emergency Response Management Competence of Community Nurses

The respondents demonstrated high overall disaster and health emergency response management competence ($M = 4.08$, $SD = 0.72$). Prevention and mitigation ranked first, followed by preparedness, recovery and rehabilitation, and response. The comparatively lower response score points to development needs in real-time field operations, emergency documentation, psychological first aid, mental health referral, and coordination

under incident conditions.

Table 3 Disaster and Health Emergency Response Management Competence of Community Nurses

Domain	M	SD	Interpretation	Rank
Prevention and mitigation	4.18	0.70	High	1
Preparedness	4.15	0.68	High	2
Response	3.97	0.79	High	4
Recovery and rehabilitation	4.02	0.72	High	3
Overall	4.08	0.72	High	—

Associations between Profile Characteristics and Adversity Quotient

As shown in Table 4, adversity quotient had statistically significant positive associations with age ($r = .214$, $p = .013$), educational attainment ($\rho = .176$, $p = .043$), emergency-response roles ($r = .251$, $p = .004$), years of relevant experience ($r = .286$, $p = .001$), and number of trainings attended ($r = .392$, $p < .001$). The strongest observed profile association was with training attendance. Gender, civil status, employment status, and current position or designation were not significantly associated with adversity quotient. These findings suggest that professional exposure and learning opportunities may be more salient than demographic or employment categories, although the cross-sectional design does not establish directionality or causation.

Table 4 Associations between Profile Characteristics and Adversity Quotient

Profile characteristic	Statistic	p	Decision	Interpretation
Age	$r = .214$	.013	Reject H_0	Significant positive association
Gender	$rpb = .038$	.664	Fail to reject H_0	Not significant
Civil status	$F = 0.77$	.463	Fail to reject H_0	Not significant
Highest educational attainment	$\rho = .176$	.043	Reject H_0	Significant positive association
Employment status	$F = 1.23$	.298	Fail to reject H_0	Not significant
Current position/designation	$F = 1.65$	.176	Fail to reject H_0	Not significant
Emergency-response roles	$r = .251$	.004	Reject H_0	Significant positive association
Years of relevant experience	$r = .286$	.001	Reject H_0	Significant positive association
Number of trainings attended	$r = .392$	< .001	Reject H_0	Significant positive association

Note. r = Pearson correlation; rpb = point-biserial correlation; ρ = Spearman rank correlation; F = one-way analysis of variance. Statistical significance was evaluated at $\alpha = .05$. Results are exploratory because multiple bivariate tests were conducted.

Relationship between Adversity Quotient and Emergency Response Competence

Adversity quotient was moderately and positively associated with disaster and health emergency response management competence ($r = .587$, $p < .001$). The coefficient of determination ($r^2 = .345$) indicates approximately 34.5% shared variance between the two constructs. This value should not be interpreted as a causal effect; rather, it indicates that nurses who reported greater capacity to manage adversity also tended to report stronger emergency management competence.

Table 5 Relationship between Adversity Quotient and Disaster and Health Emergency Response Management Competence

Variables	Test	r	p	Decision	Interpretation
Adversity quotient and emergency response management competence	Pearson correlation	.587	< .001	Reject H_0	Significant moderate positive relationship

Note. Statistical significance was evaluated at $\alpha = .05$. $r^2 = .345$.

DISCUSSION

Profile and Practice Context

The sample largely represented mid-career community nurses with sustained exposure to primary care and local public health programs. Their prominent role in health education and risk communication is consistent with the preventive and promotive orientation of community health nursing. This positioning gives community nurses direct access to households and local networks before, during, and after emergencies. At the same time, the predominance of contractual employment and a limited number of prior disaster trainings underscore the importance of institutional, portable, and equitable competency-development opportunities that do not depend on permanent employment status.

Training attendance showed the strongest profile association with adversity quotient. This pattern is consistent with evidence that disaster-related education and prior response experience contribute to greater preparedness and confidence among nurses in disaster-prone countries (Labrague & Hammad, 2024). Training may strengthen adversity management by providing mental models, role clarity, standard procedures, and repeated opportunities to practice decision-making under pressure. Nevertheless, because the study was cross-sectional, it is also possible that nurses with higher adversity quotient are more likely to seek or be selected for training.

Adversity Quotient

The very high overall adversity quotient suggests that community nurses generally perceive themselves as accountable, persistent, and able to contain the effects of difficult events. Ownership received the highest score, indicating a strong tendency to accept responsibility and initiate constructive action. This characteristic is valuable in decentralized emergency settings where nurses may need to act before additional personnel or resources arrive.

Control, although rated high, was the lowest dimension. During rapidly evolving emergencies, perceived control may be weakened by disrupted communication, uncertain authority, scarce supplies, competing demands, and concern for one's own family. Capacity-building should therefore move beyond motivational content and include scenario-based decision-making, stress regulation, incident command role clarity, escalation protocols, peer support, and structured debriefing. These strategies can help nurses distinguish between controllable tasks, influenceable conditions, and factors that require escalation or acceptance.

Emergency Response Management Competence

The high competence rating indicates a generally capable community nursing workforce. Prevention and mitigation ranked highest, reflecting routine strengths in health education, surveillance, risk communication, community mobilization, and preventive service delivery. Preparedness also ranked highly, suggesting familiarity with planning and readiness activities.

Response ranked lowest and had the largest standard deviation among the four domains, suggesting greater variability in nurses' exposure to and confidence in real-time operations. This finding parallels reviews documenting gaps in applied disaster skills and psychological preparedness despite generally positive perceptions of readiness (Labrague et al., 2018; Said & Chiang, 2020). Priority content should include field triage, mass-casualty principles, outbreak operations, patient tracking, emergency referral, continuity of essential services, safety and security, rapid needs assessment, documentation, logistics, and inter-agency communication. Psychological first aid warrants dedicated attention because repeated training and applied practice are recommended to strengthen nurses' self-efficacy in psychosocial response (Kılıç Bayageldi & Kaloğlu Binici, 2024; Said et al., 2022).

Profile Factors Associated with Adversity Quotient

Age, educational attainment, emergency-response roles, relevant experience, and training attendance were positively associated with adversity quotient. The small associations with age and education may reflect

accumulated problem-solving exposure and broader professional preparation. The associations with role breadth and experience suggest that repeated engagement in public health and emergency functions may help nurses develop confidence, role ownership, and endurance. Training attendance demonstrated the strongest association, supporting a structured program of recurrent learning rather than isolated seminars.

Gender, civil status, employment status, and current position were not significantly associated with adversity quotient. Accordingly, resilience and emergency-response development should be made available across demographic groups, employment categories, and position levels rather than targeted only to selected subgroups. Because the analyses were bivariate and multiple tests were conducted, these patterns should be confirmed through adequately powered multivariable studies.

Relationship between Adversity Quotient and Emergency Response Competence

The moderate positive correlation between adversity quotient and emergency response competence is a central finding. It suggests that adaptive functioning under pressure and technical emergency competence are related workforce capacities. Similar evidence has shown positive relationships between nurses' resilience and disaster core competencies (Alan et al., 2022). Nurses who perceive greater control, accept responsibility, contain the reach of adversity, and expect difficulties to be time-limited may be more able to apply knowledge, coordinate action, and persist during complex response operations.

The shared variance of approximately 34.5% also indicates that adversity quotient is not the only relevant factor. Emergency competence is likely shaped by training quality, actual deployment experience, leadership, staffing, equipment, protocols, transportation, communication systems, and coordination mechanisms. The practical implication is that resilience-building should be integrated with systems strengthening and skills-based training rather than delivered as a stand-alone wellness activity.

Contextualized Emergency Response Management Plan

The Contextualized Emergency Response Management Plan was developed from three converging findings: (a) control was the lowest adversity quotient dimension; (b) response was the lowest emergency management competence domain; and (c) adversity quotient and competence were moderately and positively related. The plan is intended for adaptation by the Provincial Health Office, municipal health offices and rural health units, and partner disaster-management agencies in Northern Samar. It follows an all-hazards approach and should be tailored to each municipality's hazard, vulnerability, capacity, referral, communication, and transportation profile.

Table 6 Contextualized Emergency Response Management Plan for Community Nurses in Northern Samar

Priority area and evidence base	Specific objective	Core activities	Lead and partners	Time frame	Performance indicators
1. Governance, baseline assessment, and local contextualization Basis: variability in response competence and diverse municipal settings	Establish a coordinated and municipality-specific system for community nursing emergency management.	- Form a Provincial–Municipal Community Nursing Emergency Response Technical Working Group. - Map priority hazards, vulnerable populations, GIDA/coastal access constraints, referral routes, transport, communications, and surge resources. - Conduct baseline competency, adversity-	Provincial Health Office; MHOs/RHUs; DOH Center for Health Development; PDRMO/MDRRMOs; referral hospitals; BFP/PNP; Philippine Red Cross; barangay health teams	Months 1–2; annual updating	- TWG constituted with approved terms of reference. 100% of participating MHOs/RHUs have updated hazard–capacity profiles and nursing role matrices. - Baseline report completed and endorsed.

		control, equipment, protocol, and training-needs assessments. • Define nursing roles within incident command and local DRRM structures.			
2. Adversity control and psychological readiness Basis: control was the lowest AQ dimension (M = 4.16)	Improve composure, perceived control, decision-making, and self-care during high-pressure events.	• Provide stress-inoculation and scenario-based decision training. • Teach rapid grounding, task prioritization, controllable–uncontrollable analysis, and escalation protocols. • Establish buddy systems, peer support, pre-deployment briefings, and post-event debriefing/referral. • Integrate family preparedness plans for responders.	PHO nursing leadership; mental health program coordinators; trained psychologists/psychiatric nurses; MHO supervisors; HR units	Months 2–4; semiannual refreshers and after major events	• ≥90% of community nurses complete the module. • ≥10% improvement in control and scenario decision scores from baseline. • Peer-support and referral pathway operational in all participating municipalities.
3. Operational response competence Basis: response was the lowest competence domain (M = 3.97)	Standardize essential nursing actions during the first operational period of an emergency.	• Competency-based modules on rapid health assessment, triage, first aid, outbreak response, infection prevention, patient tracking, referral, continuity of essential services, safety, and surge staffing. • Develop quick-reference job aids and go-bag checklists. • Conduct tabletop, functional, and field simulations using locally identified hazards.	PHO/MHO training teams; DRRM offices; hospitals/EMS; BFP; Red Cross; nursing schools	Months 3–8; at least two drills yearly	• ≥80% achieve the predefined skill standard during objective structured simulations. • 100% of MHOs/RHUs maintain updated job aids and nursing go-bag checklists. • Corrective actions from drills closed within 60 days.
4. Psychological first aid and mental health referral Basis: identified gap in psychosocial response	Strengthen safe, culturally responsive psychosocial support and timely referral.	• Train nurses in psychological first aid, supportive communication, suicide/self-harm risk recognition, child/older-person considerations, and referral thresholds. • Establish municipality-specific directories and warm-referral procedures. • Include psychosocial stations in simulations and evacuation-center protocols.	Mental Health Program; PHO/MHOs; hospitals; social welfare offices; schools; faith/community organizations; Red Cross	Months 3–6; quarterly case review	• ≥90% trained in PFA and referral. • 100% of municipalities maintain current referral directories. • ≥85% correct performance in PFA simulation checklist.

5. Emergency documentation, surveillance, and communication Basis: identified response gap in documentation and coordination	Improve timely, complete, and interoperable emergency health information.	• Standardize minimum data sets, patient tracking, incident logs, situation reports, and handover forms. • Train on risk communication, rumor management, data privacy, and redundant communication channels. • Assign documentation and communication roles per shift/team. • Conduct periodic record audits.	PHO epidemiology/surveillance units; MHOs/RHUs; DRRM emergency operations centers; hospitals; local information offices	Months 4–7; quarterly audits	• $\geq 90\%$ completeness and timeliness in simulation/incident records. • Situation report submitted within locally prescribed timelines. • Tested redundant communication plan in every participating municipality.
6. Mentoring, role exposure, and equitable training access Basis: AQ associated with roles, experience, and training; no association with employment status or position	Use experiential learning while ensuring access across positions and employment categories.	• Pair less-experienced nurses with trained mentors. • Rotate staff through surveillance, EOC liaison, evacuation health, vaccination/outbreak, logistics, and recovery assignments. • Maintain an individual competency passport and training registry. • Prioritize contractual and geographically isolated staff for funded participation.	PHO/MHO nursing supervisors; HR units; DOH CHD; partner hospitals and agencies	Months 4–12; ongoing thereafter	• 100% have competency passports. • $\geq 80\%$ complete at least one supervised role exposure annually. • Training participation shows equitable coverage by employment status and municipality.
7. Recovery, continuity, and learning system Basis: need to sustain competence across the full emergency cycle	Institutionalize recovery nursing, continuity of essential services, and continuous improvement.	• Develop service-continuity and staff-relief plans. • Conduct after-action reviews within 72 hours of drills or major activations when feasible. • Track corrective and preventive actions. • Provide follow-up for affected staff and communities. • Review outcomes annually and revise the plan.	PHO/MHOs; DRRM offices; hospitals; social welfare; finance/procurement; partner agencies	Months 6–12; after every activation; annual review	• After-action review completed for $\geq 90\%$ of drills/activations. • $\geq 80\%$ of agreed corrective actions completed by due date. • Annual report documents competence trends, response indicators, and plan revisions.

Note. AQ = adversity quotient; DOH = Department of Health; EOC = emergency operations center; GIDA = geographically isolated and disadvantaged area; MHO = municipal health office; MDRRMO = municipal disaster risk reduction and management office; PDRRMO = provincial disaster risk reduction and management office; PFA = psychological first aid; PHO = Provincial Health Office; RHU = rural health unit; TWG = technical working group. Targets may be adjusted after baseline assessment and resource review.

Implementation and Evaluation

Implementation should begin with formal endorsement, a designated technical working group, and a baseline assessment. Training should use a blended competency-based approach that combines brief didactic content with tabletop exercises, skills stations, simulation, supervised role exposure, and after-action learning. Municipal adaptation is essential: each site should define priority hazards, vulnerable groups, referral destinations, transportation options, backup communication channels, and minimum nursing resources.

Evaluation should include process, competency, and system indicators. Process measures include training completion, drill participation, mentorship coverage, and availability of protocols. Competency measures include pre- and post-training scores, structured simulation performance, PFA skills, documentation accuracy, and communication performance. System measures include activation time, referral completion, continuity of essential services, timeliness of situation reports, closure of after-action recommendations, and staff well-being indicators. Annual review should determine whether the plan improves the response domain and adversity-control scores identified as priorities in this study.

Limitations

The study used self-reported measures and may therefore be affected by social desirability, recall, and common-method bias. Competence scores reflect perceived rather than directly observed performance.

The cross-sectional design precludes conclusions about causality or the direction of relationships. The observed association between training and adversity quotient, for example, may reflect both training effects and self-selection.

The study was conducted in one Philippine province and may not represent community nurses in urban centers, other regions, or different health-system contexts.

Multiple bivariate analyses increase the possibility of type I error, and the available results did not include multivariable adjustment for potentially overlapping factors such as age and experience. Future studies should use multivariable models and report effect sizes and confidence intervals.

The instrument underwent expert validation and local reliability testing, but further psychometric evaluation—such as construct validity, criterion validity, and measurement invariance—is recommended. Future research should also include observed simulations, qualitative inquiry, and longitudinal evaluation of the proposed plan.

CONCLUSION

Community nurses in Northern Samar demonstrated a very high adversity quotient and high disaster and health emergency response management competence. Ownership and prevention and mitigation were the strongest areas, whereas control and operational response were comparatively lower. Adversity quotient was positively associated with age, educational attainment, emergency-response roles, relevant experience, and training attendance, with training showing the strongest profile association. The moderate positive relationship between adversity quotient and emergency response competence indicates that adaptive functioning and technical capability should be developed together. The findings support an integrated, context-sensitive plan that combines resilience and psychological readiness, skills-based response training, psychological first aid, documentation, inter-agency coordination, mentoring, simulation, and continuous performance review.

RECOMMENDATIONS

1. Institutionalize recurrent, competency-based disaster and health emergency training for all community nurses, regardless of employment status or position.
2. Prioritize control-related resilience skills and the response domain through realistic simulation, incident command role clarification, field documentation, psychological first aid, and referral exercises.

3. Use mentorship, supervised role rotation, and after-action reviews to translate experience into standardized competence.
4. Adopt and locally adapt the proposed Contextualized Emergency Response Management Plan through Provincial Health Office and municipal health system coordination.
5. Conduct longitudinal and multivariable studies using objective performance measures to determine whether adversity quotient predicts competence and whether the proposed interventions improve response outcomes.

Ethical Considerations

The study observed ethical principles in research involving human participants. Administrative permission was secured from the concerned provincial and municipal health authorities prior to data collection. Participation was voluntary, and informed consent was obtained from all respondents before they answered the questionnaire. Confidentiality and anonymity were maintained by ensuring that no personally identifiable information was disclosed in the presentation of data. The collected information was used solely for research purposes, stored securely, and accessed only by the researcher.

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