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Influence of Awareness, Participation in Drrm Activities & Disaster Preparedness on Student's Engagement in Emergency Management Practices

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ABSTRACT

Disaster preparedness is essential in developing community resilience among future educators; however, existing studies indicate a gap between students' disaster awareness, participation in Disaster Risk Reduction and Management (DRRM) activities, disaster preparedness, and their engagement in emergency management practices. This study examined the influence of disaster awareness, participation in DRRM activities, and disaster preparedness on student engagement in emergency management practices among education students. Guided by the Protection Motivation Theory (Rogers, 1975), the study employed a descriptive-correlational research design involving 141 students selected through stratified random sampling. Data were collected using a validated survey questionnaire measuring the variables of disaster awareness, participation in DRRM activities, disaster preparedness, and student engagement in emergency management practices. Descriptive analysis revealed generally high levels across the measured variables. Multiple regression analysis indicated that disaster awareness, participation in DRRM activities, and disaster preparedness significantly influenced student engagement in emergency management practices, with participation emerging as the strongest predictor. The findings highlight that while awareness provides foundational knowledge, active participation in DRRM initiatives and practical preparedness activities play a stronger role in enhancing students' readiness and engagement in emergency management practices. These results underscore the importance of strengthening experiential and participatory DRRM initiatives within teacher education programs to further enhance students' preparedness and engagement in emergency management practices.

Keywords: awareness, disaster preparedness, DRRM participation, student engagement in emergency management practices

INTRODUCTION

The Philippines stands as a country that is most vulnerable to disasters globally, and this may be attributed to its position on the Pacific Ring of Fire and within the typhoon corridor. This vulnerability demands a comprehensive strategy for disaster readiness, especially within educational settings where young individuals can be encouraged to engage proactively in Disaster Risk Reduction and Management (DRRM). Malto (2021) noted that an increased understanding of disaster risks among students greatly enhances their preparedness, underscoring the importance of incorporating DRRM into higher education curricula.

Natural disasters pose a serious threat to life, property, and the continuation of education, especially in areas that are already weak, like the island province of Camiguin. The students are expected to be academically strong and ready to handle emergencies as future teachers. It remains concerning to some extent, even while efforts are being made to include Disaster Risk Reduction and Management (DRRM) education in the primary and secondary school curricula, concerning the awareness, engagement, and overall implications on the preparedness of tertiary students in DRRM activities. Indeed, disasters are recurring and increasing in frequency and intensity around the globe. This underpins why every institution, especially schools, ought to prioritize preparedness.

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Furthermore, actively taking part in drills, seminars, and community-based activities related to DRRM helps cultivate the confidence and competence needed for disaster response. Medina and Dungo's (2024) research concerning students participating in simulation exercises revealed a marked improvement in strategic thinking and resilience during real-world crises. Ching et al. (2023) highlights that the use of information technology in learning during Disaster Risk Reduction Management (DRRM) classes increases focus and retention, Similarly, integrating disaster preparedness topics into educational curricula has been found to significantly improve students' understanding of disaster response procedures and safety protocols (Kim et al., 2023).

Technology-enhanced learning platforms also support interactive disaster preparedness training and improve student engagement in DRRM education (Roberts, 2025). turning preparation into a more accessible process. Disaster risk reduction (DRR) commences within the higher learning institutions which seek to build a culture of resilience among learners through relevant workshops and structured programs. Educators and community leaders of tomorrow, the BTLED students, as well as their peers from other colleges of education, are expected to model and advocate for a culture of disaster preparedness.

Teacher education institutions therefore play an essential role in strengthening disaster preparedness by integrating DRRM concepts into the curriculum and training future educators to promote safety practices within schools and communities (Gonzales et al., 2023; Kang & Lee, 2024; Smith & Lee, 2021). Their individual level of awareness and engagement with the practiced frameworks of safety is fundamental not only for personal protection, but also in their emerging roles as national change champions in schools and communities.

According to Asuncion et al. (2023), university students' awareness is significantly influenced by educational exposure to disaster-related content. Disaster awareness among university students is also shaped by exposure to hazard education, safety campaigns, and risk communication programs implemented within educational institutions (Francisco et al., 2024; Park et al., 2023). Additionally, awareness plays a critical role in influencing preparedness behaviors and risk perception among students (Lee & Choi, 2021). Meanwhile, Reyes et al. (2023) emphasized that students who undergo regular training and drills demonstrate a higher level of preparedness and response efficiency. These findings highlight the need to assess and strengthen disaster preparedness education, particularly among future educators.

Although policies promote integrating disaster preparedness into educational environments, there is limited empirical research examining how future educators perceive and adopt these initiatives. Studies focusing on pre-service teachers' experiences and preparedness in DRRM contexts are relatively few, with existing research highlighting gaps in applied DRRM skills and the need for stronger curricular integration in teacher education programs (Suanco et al., 2023; Malque Pub, 2025; BMC Public Health, 2025). Nonetheless, how their understanding, availability of resources, and involvement in DRRM activities convert into tangible preparedness is still largely unexamined. Closing this gap is essential to guarantee that upcoming teachers possess both knowledge and practical skills to handle disasters and promote resilience in their future classrooms and communities.

Although there is an increasing incorporation of Disaster Risk Reduction and Management (DRRM) education within schools in the Philippines, previous research largely concentrated on the general student body or those in basic education. This has created a significant void in studies focused on particular tertiary programs like the Bachelor of Technology and Livelihood Education (BTLEd). Additionally, much of the existing research tends to examine isolated factors such as awareness or participation, failing to thoroughly analyze how these elements interact with resource access to influence disaster preparedness practices (Malto, 2021; Medina & Dungo, 2024).

There was also a scarcity of localized research in areas that are geographically isolated and prone to disasters, such as Camiguin, where the limited infrastructure and resources could affect the execution and success of DRRM initiatives. This study aimed to fill this gap by exploring the synergistic effects of awareness, emergency management, and involvement in DRRM activities on the preparedness practices of students, thus providing a more localized and program-specific insight into DRRM involvement in higher education.

This research supports on the worldwide dedication to sustainable development, especially regarding disaster risk reduction and management. It directly aligns with Sustainable Development Goal (SDG) 11: Sustainable

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Cities and Communities, particularly Target 11.5, which seeks to considerably minimize the number of individuals impacted by disasters. This study enhances the formation of safer and more resilient communities by analyzing how awareness, resource availability, and involvement in DRRM activities affect the disaster preparedness of BTLEd students at the province of Camiguin.

Additionally, the research corresponds with Sustainable Development Goal (SDG) 13: Climate Action, especially Target 13.1, which highlights the importance of enhancing resilience and adaptive capacity to climate-related risks and natural disasters. This research examines how awareness, access to resources, and involvement in DRRM activities affect the disaster preparedness habits of students at the province of Camiguin, by analyzing these interconnected factors, the study seeks to aid in creating more effective, student-focused DRRM strategies that foster a culture of safety and readiness within higher education.

Research questions

This study sought to examine the students' level of awareness of disaster, their participation in DRRM activities, and the influence of these factors on their engagement in emergency management practices. Specifically, it answered the following questions:

1. What is the level of awareness on disaster preparedness of students?

2. What is the participants' level of participation in DRRM related activities?

3. What is the participants' level of disaster preparedness?

4. What is the participants' Students' Engagement in Emergency Management Practices?

5. Do the participants' awareness of disaster management, participation in DRRM-related activities, and disaster preparedness significantly influence their Students' Engagement in Emergency Management Practices?

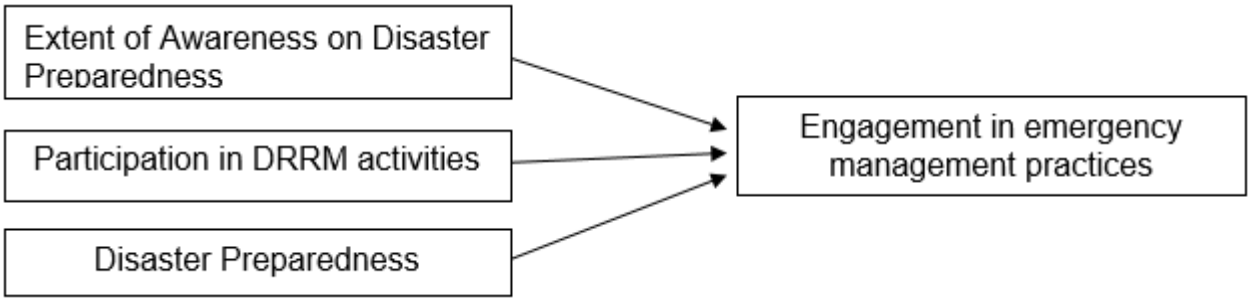

Figure 1. Schematic Diagram of the Study

METHODOLOGY

The descriptive correlational research design was employed because the study sought to describe the levels of awareness, participation, disaster preparedness, and engagement on emergency management practices among students, while also determining the predictive influence among these variables. This design allowed the researcher to obtain a comprehensive understanding of existing conditions without manipulating any factors (Creswell & Creswell, 2018), and was statistically examine how awareness and participation relate to and influence preparedness and practices.

In this context, it provides a clear picture of how students perceive disaster risks and what preparedness measures they undertake in their natural setting. According to Creswell (2014), descriptive studies are particularly valuable when the aim is to present and analyze trends within a given population, rather than to establish causality. this aligns with the current study's objective of examining disaster preparedness awareness and practices as they occur among students. As Sekaran and Bougie (2016) note, descriptive designs are more effective in addressing

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"what is" questions than in attempting to explain "why" phenomena exist. Accordingly, this research emphasizes identifying the levels of awareness and preparedness rather than probing into their underlying causes.

The participants of this study were drawn from the Bachelor of Technology and Livelihood Education students enrolled at the Institute of Teacher Education of the College, located on Camiguin Island, Philippines. The total population of BTLEd students is 217, distributed across different year levels and sections. It was ensured that all groups of students are proportionally represented, the study was employed stratified random sampling.

The main method of data gathering hinges on a systematic questionnaire comprised of three sections: Part I concerning Awareness on Disaster Preparedness derives from NDRRMC (National Disaster Risk Reduction and Management Council) 2020, DepEd DRRM Manual 2018 and UNDRR 2015. The second part which is the student engagement in Emergency Management practices (Based on Asian Disaster Preparedness Center, International Federation of Red Cross and Red Crescent Societies (2021). Community-based disaster response.) Part III on the Level of Participation in DRRM Activities is based from Based on DepEd DRRM Implementation Strategies (2018) and NDRRMC Guidelines (2020). Furthermore, Part IV of the survey questionnaire on Level of Disaster Preparedness draws from WHO: Health Emergency and Disaster Risk Management Framework, 2019 and IFRC, 2020.

The instrument was evaluated by three experts considering the content validity. For the reliability, pilot testing also conducted in same institution with 30 participants and then collected data were analyzed using Jamovi software, applying Cronbach's alpha as the measure of internal consistency, The results of the pilot testing revealed that the instrument achieved high reliability across all variables.

The Cronbach's alpha coefficients obtained were as follows: 0.860 for Awareness on Disaster Preparedness, 0.849 for Students' Engagement in Emergency Management Practices, 0.793 for Participation in DRRM Activities, and 0.773 for Disaster Preparedness. Since all computed values exceeded the acceptable threshold of 0.70. This implies that the items within each variable reliably measure the same concept, and participants provided consistent responses across related items. Therefore, the instrument can be considered both valid and reliable for use in the actual data-gathering process, ensuring credible and dependable results for the study.

The research instrument utilizes a 5-point Likert scale to quantify respondents' perceptions across four major dimensions.

Scale	Description	Mean Score Range	Interpretation
5	Strongly Agree	4.51 – 5.00	Very High
4	Agree	3.51 – 4.50	High
3	Neutral/Undecided	2.51 – 3.50	Moderate
2	Disagree	1.51 – 2.50	Low
1	Strongly Disagree	1.00 – 1.50	Very Low

RESULTS AND DISCUSSIONS

Problem 1. What is the level of awareness of disaster management of BTLEd–Home Economics students?

Table 1 shows the distribution of participants concerning their awareness of disaster preparedness, which includes their frequency, percentage, and mean. The results indicate an overall mean of 4.45 and standard deviation of 0.42, which is interpreted as High. This shows that the BTLEd - HE students display a high level of awareness regarding Disaster Risk Reduction and Management (DRRM) and the concepts of disasters, school emergency plans, and safety procedures.

Regarding distribution, 71 participants (50.35%) noted their awareness as Very High, and 70 participants (49.65%) noted their awareness as High. Most striking is that no participant selected neutral, low, or very low. This shows that 100% of the participants demonstrated High to Very High awareness, showcasing a high level

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of understanding of the group about disaster preparedness. The standard deviation of (SD) 0.42 means that the responses are very closely clustered around the mean, which shows very low variance of participants. In simple terms, the students held a similar and strong awareness of disaster preparedness and the associated safety measures. The results indicate the effectiveness of the institution in promoting Disaster Risk Reduction and Management (DRRM) education by using orientations, drills, workshops, and dissemination of information to make sure that students are well informed. High awareness of dangers, procedures, and strategies is the basis for understanding the appropriate behaviors for disaster response and preparedness. The results affirmed the heightened awareness regarding disaster preparedness demonstrated by BTLEd–Home Economics students, and this strong foundation encourages active participation in DRRM activities and emergency management practices.

Table 1 Frequency, Percentage and Mean Distribution of *the Participants' Awareness on Disaster Preparedness*

Range	**Description**	**Interpretation**	**Frequency**	**Percentage**
4.51-5.00	Strongly Agree	Very High	71	50.35
3.51-4.50	Agree	High	70	49.65
2.51-3.50	Neutral	Moderate	0	0.00
1.51-2.50	Disagree	Low	0	0.00
1.00-1.50	Strongly Disagree	Very Low	0	0.00
		Total	**141**	**100**
		Overall Mean	**4.45**	
		Interpretation	**High**	
		SD	**0.42**	

Problem 2. What is the participants' level of participation in DRRM related activities.

Table 2 presents the frequency, percentage, and mean distribution of each participants' level of involvement in DRRM-related activities. Overall, the mean of the results is 4.01 and the standard deviation is 0.52, which is interpreted as High. Most of the BTLEd–Home Economics students show involvement in the disaster preparedness activities organized by the school and by the community. The mean score indicates a tendency of students to go beyond the mere attendance to the activities. Most students are likely to participate in the drills and workshops, and in the community DRRM activities.

Table 2 Frequency, Percentage and Mean Distribution of the Participants' Level of Participation in DRRM Related Activities

Range	**Description**	**Interpretation**	**Frequency**	**Percentage**
4.51-5.00	Strongly Agree	Very High	27	19.15
3.51-4.50	Agree	High	84	59.57
2.51-3.50	Neutral	Moderate	30	21.28
1.51-2.50	Disagree	Low	0	0.00
1.00-1.50	Strongly Disagree	Very Low	0	0.00
		Total	**141**	**100**
		Overall Mean	**4.01**	
		Interpretation	**High**	
		SD	**0.52**	

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Their consistent engagement demonstrates a strong commitment to disaster preparedness, which complements their high awareness and lays the foundation for effective household and community emergency management practices. These findings suggest that although students consistently join mandatory drills and preparedness workshops, their involvement in more specialized or leadership-oriented DRRM initiatives remains relatively limited. Previous research confirms that active participation in disaster preparedness activities such as drills, workshops, and community simulations significantly strengthens students' disaster response skills and preparedness behaviors (Camacho & Ferrer, 2023; Martinez et al., 2024).

This may be attributed to fewer available opportunities, limited capacity to take on organizational responsibilities. Nonetheless, the overall results indicate that the respondents maintain an active and positive engagement in DRRM activities, which strengthens their preparedness and safety awareness. Bernardo and Velasco (2023) reported that students showed strong attendance in routine DRRM drills but limited involvement in planning and decision-making roles due to lack of training. Similarly, Salazar and Manalo (2024) found that while learners frequently joined simulations and community DRRM activities, leadership tasks and committee participation were often assigned only to selected or trained groups, reducing broader student engagement.

Additional studies also affirm that experiential and hands-on DRRM activities encourage high participation, whereas leadership roles demand higher competency and institutional facilitation (Dizon & Bautista, 2022; Ramos, 2023), these studies support the interpretation that students exhibit positive and active engagement in DRRM activities, but further opportunities for leadership development and structured involvement may enhance their participation in more advanced DRRM functions.

Problem 3. What is the level of disaster preparedness among BTLEd HE students?

Table 3 reveals that the exhibit a high level of disaster preparedness, as reflected by the overall mean of 4.14. This suggests that students are generally ready to take appropriate actions during emergencies, access necessary resources, and maintain awareness of hazard-related information. The highest-rated indicators of preparedness include knowledge of safe evacuation areas *(M* = 4.38), keeping important phone numbers easily accessible *(M* = 4.38), and regularly monitoring hazard warnings from credible sources *(M* = 4.32).

These results indicate that students prioritize locating safety zones, maintaining communication lines during emergencies, and staying updated on potential threats essential components of effective preparedness. On the other hand, slightly lower but still high indicators involve the ability to quickly gather essentials during sudden evacuation (M = 4.05) and possessing emergency skills to assist others (M = 4.02). These scores suggest that while students demonstrate strong foundational preparedness, some may still require further enhancement of rapid response actions and practical emergency competencies.

Table 3 Frequency, Percentage and Mean Distribution of *the Level of Disaster Preparedness among BTLEd HE Students*

Range	**Description**	**Interpretation**	**Frequency**	**Percentage**
4.51-5.00	Strongly Agree	Very High	31	21.99
3.51-4.50	Agree	High	91	64.54
2.51-3.50	Neutral	Moderate	19	13.48
1.51-2.50	Disagree	Low	0	0.00
1.00-1.50	Strongly Disagree	Very Low	0	0.00
		Total	**141**	**100**
		Overall Mean	**4.14**	
		Interpretation	**High**	
		SD	**0.51**	

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Reyes and Sarmiento (2023) highlighted that learners often show strong awareness of evacuation routes and early warning systems but exhibit gaps in hands-on skills such as first aid or rapid evacuation procedures. Likewise, the study of Corpuz and Almonte (2024) found that while students consistently monitor hazard advisories and maintain emergency contacts, their confidence in executing emergency tasks like assisting injured peers or performing basic rescue remains moderat the findings imply that BTLEd–HE students are confident and knowledgeable in managing disaster situations, yet opportunities remain to improve their immediate response capabilities and hands-on skills during actual emergencies.

Problem 4. What is the extent of student's engagement in emergency management practices of the BTLEd HE students?

Table 4 shows that the participants demonstrate a high extent of household emergency management practices, as indicated by the overall mean of 4.18. This suggests that students consistently apply their knowledge of disaster preparedness within their homes, engaging in behaviors that contribute to family safety and readiness. Protection important components of household preparedness. Meanwhile, the lowest-rated indicators, though still within the high range, involve maintaining functional fire safety equipment at home (M = 3.87) and regularly updating emergency kits (M = 4.02–4.11 The most highly rated practices are monitoring reputable media and official communications during emergencies (M = 4.48), knowledge of household evacuation routes and safe locations (M = 4.35), and store important documents in safe and waterproof containers (M = 4.33). This indicates that respondents appreciate proper monitoring of information and evacuation planning, and proper document storage. In addition, these scores indicate that there are deficiencies in fire safety equipment and emergency preparedness materials, which suggests that improvements in these areas are necessary.

Table 4 Frequency, Percentage and Mean Distribution of Extent of student's engagement Management Practices of BTLEd–Home Economics Students

Range	Description	Interpretation	Frequency	Percentage
4.51-5.00	Strongly Agree	Very High	34	24.11
3.51-4.50	Agree	High	95	67.38
2.51-3.50	Neutral	Moderate	12	8.51
1.51-2.50	Disagree	Low	0	0.00
1.00-1.50	Strongly Disagree	Very Low	0	0.00
		Total	**141**	**100**
		Overall Mean	**4.18**	
		Interpretation	**High**	
		SD	**0.44**	

While tracking weather information and identification of safe zones were done by students, there were inconsistencies in keeping emergency kits up to date, according to Manalili and Corpuz (2024). Also, studies show that preparation practices for emergencies in households are strongest in behaviors that require less technical knowledge, and are less frequent in practices that require maintenance or more expenses (Roldan & Esquivel, 2022; Javier, 2023). These studies indicate that BTLEd–HE students enact almost all household preparedness behaviors, and more focus on equipment maintenance and readiness could greatly improve safety.

Problem 5. Do the participants' awareness of disaster management, participation in DRRM-related activities, and disaster preparedness significantly influence their Students' Engagement in Emergency Management Practices?

H_{o1}. The participants' awareness of disaster management, participation in DRRM-related activities, and disaster preparedness do not significantly influence their Engagement in Emergency Management Practices

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H_{02}: Participants' level of awareness on disaster management does not significantly influence their level of disaster preparedness.

H_{03}: Participants' level of participation in DRRM-related activities does not significantly influence their engagement in emergency management practices

The results of the study reveal that students' awareness of disaster management, participation in DRRM-related activities, and overall disaster preparedness significantly influence their Engagement in Emergency Management Practices. The multiple regression analysis showed that the combined model was statistically significant, $F(3,137) = 60.06$, $p < .001$, indicating that students who are more knowledgeable about disaster management, actively participate in DRRM activities, and report higher preparedness levels are also more likely to implement effective emergency practices.

Table 5 Regression Analysis of Awareness of Disaster Management, Participation in DRRM Related Activities, Disaster Preparedness, and Household Emergency Management Practices

Predictor	**Unstandardized Coefficients**		**β**	**95% CI**		**T**	**p**
	B	**SE**		**Lower**	**Upper**		
Constant	.781	.292		.205	1.358	2.680*	.008
Awareness of Disaster Mgt.	.190	.065	.180	.061	.319	2.903*	.004
Participation in DRRM- Related Activities	.314	.062	.373	.191	.436	5.075*	.000
Disaster Preparedness	.313	.061	.364	.192	.434	5.112*	.000
Model Summary							
$R = 0.754$ $R^2 = 0.568$ Adjusted $R^2 = 0.559$ $F(3,137) = 60.06$** $p = .000$							
Note. B = unstandardized beta coefficient, SE = standard error, β = standardized beta coefficient, 95% CI = 95% confidence interval, t = t statistic, p = probability value.							
***significant at 0.01 two-tailed alpha level.*							

Specifically, the findings indicate that awareness contributes foundational knowledge that enables students to anticipate and plan for potential disasters, while participation in hands-on DRRM activities strengthens practical skills and confidence in emergency response. Preparedness, in turn, reflects the application of both knowledge and experience in managing household emergencies. Consequently, the null hypotheses H_{01}: The participants' awareness of disaster management, participation in DRRM-related activities, and disaster preparedness do not significantly influence their Engagement in Emergency Management Practices, the regression model is statistically significant, $F(3,137) = 60.06$, $p < .001$, showing that the three predictors impact engagement in emergency management

The model has strong explanatory power as it shows the variance in emergency management practices as 56.8% ($R^2 = 0.568$). Because the p-value of the overall model is less than 0.01, we reject H_{01}. This indicates that the variables awareness, participation, and preparedness have significant positive impacts on students' engagement in emergency management.

The null hypotheses H_{02}: There was no significant relationship between the participants' levels of understanding of their disaster preparedness and their levels of disaster preparedness is considered to be true. However, the regression results show awareness of disaster management practices to be a significant predictor of emergency management practices ($B = 0.190$, $\beta = 0.180$, $t = 2.903$, $p = .004$). This means that, although the awareness

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predictor has the least beta value (β = 0.180), awareness of disaster management still significantly contributes to the positive change in the disaster-related behavior of the participants.

The null hypothesis H_{03}: There was no significant effect of the participants' levels of participation in DRRM-related activities and their levels of disaster preparedness has been considered to be true. However, participation in DRRM-related activities is a significant predictor of emergency management practices (B = 0.314, β = 0.373, t = 5.075, p < .001). In the model that h = 0.373, participation has one of the highest influence weights, meaning that students who participatively and responsively participate in DRRM activities have a higher tendency to perform the appropriate and adequate emergency management practices, therefore, being participative, aware, and prepared are enough to predict one's engagement in emergency management practices.

Furthermore, a combination of the predictor variables accounts for almost 57% of the variability in that engagement in emergency management. The other 43% relates to factors of a socioeconomic nature, availability of household resources, prior disaster experiences, family beliefs and attitudes toward preparedness, community based DRRM initiatives, geographic areas subject to hazards, access to emergency equipment, the influence of parents, and the effectiveness of the disaster initiatives of the local government. Of the predictors, the greatest contribution by far was participation in DRRM-related activities of β = 0.373, p < .001. The implication of this is that participants in those activities practice disaster preparedness to a greater extent.

Disaster preparedness (β = 0.364, p < .001) and awareness of disaster management (β = 0.180, p = .004) were also significant. Disaster preparedness participation and awareness result in larger effect sizes. Engagement through drills, training, and hands-on exercises, as well as physical preparedness (e.g., plans, kits, and skills) seems to facilitate behavioral change among participants. Behavioral change studies along with DRRM also support greater participation, as they strengthen social norms and procedural competencies to act (Gaillard, Cadag, & Rampengan, 2022).

DRR knowledge, as per the United Nations Office for Disaster Risk Reduction (2020), only becomes beneficial when awareness is turned into action. Along with practical measures, contingency planning, mobilization of resources, and training are essential to strengthen the capacity of the community. Public awareness of hazards also needs to be supported through practical measures. This is emphasized by the World Health Organization (2021) through household preparedness kits and simulation exercises. Throughout the years of research, the WHO also points out that planning, and response training are crucial to translating knowledge into action in emergencies. Shiwaku and Shaw (2020) illustrate that hands-on participation in Disaster Risk Reduction and Management (DRRM) activities promotes greater confidence, self-efficacy, and self-initiated household safety behaviors than information-based activities. This aligns with the concept that focused, experiential, and situational learning helps people apply what they know about being prepared for disasters. Therefore, DRRM activities that combine information with organized, regular, and active participation, as well as materials and household-level preparedness tools, are more likely to yield significant and sustained changes toward improved behaviors in emergency management. This shows that although awareness activities are useful, practice and active participation are critical in orienting people to take the necessary actions when an emergency occurs.

CONCLUSIONS

In analyzing the data received from the study, some conclusions regarding student disaster preparedness can be drawn. Students show a notable, elevated level of disaster preparedness with the current information showing that the student body is, knowledgeable, participative, and proactive in disaster related activities, specifically in activities related to disaster risk reduction and management.

Their involvement in the concepts of DRRM, participation in the drills and trainings, and the actual emergency management practices, illustrates the comprehensive preparedness that the student body practices and that extends beyond theory. More inactive participation and practice preparedness is of greater significance than awareness which also leads to greater participation with emergency management practice. Despite the awareness piece being necessary, engagement is also a factor of significance as it is the means that students use to convert that knowledge into an action that is purposeful and effective. The awareness piece is the foundation of both participation and preparedness and remains necessary.

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The various risk, protocols, and responsibilities of disaster impact and management are some of the factors that remain necessary prior to applying purposefully and meaningfully the DRRM knowledge. Applying the knowledge of DRRM in the context of both school and home is still necessary. This study does raise the factor of disaster preparedness and the various caveats that were not factors of this study and that warrant study in future research. Disaster preparedness is also strengthened with any prior disaster experience, the presence of any usable resource, and the presence or absence of family support to the student.

Disaster preparedness is already a study and this study further supports that awareness, participation, and practice make the study of disaster preparedness most effective. Educators and communities can build the capacity of citizens who are knowledgeable about disasters and are ready to take action to create a safer and more resilient community by providing knowledge, involving students in valuable activities, and stimulating their response at home.

Disaster preparedness is a combination of awareness, involvement, and action, and this coordination is what makes preparedness in students most effective. Knowledge creates the awareness and response, involvement describes the action and response, and preparedness ensures the action is taken, consistently, at school and at home.

RECOMMENDATIONS

Based on these conclusions and findings, the study offers the following recommendations for students, the institution, the community, and future research:

For Students to:

- continue actively participating in DRRM-related activities such as drills, trainings, and safety programs.
- regularly update household emergency preparedness plans, emergency kits, and contact lists.
- Share knowledge and tips about disaster preparedness and contingency planning with family members and peers to foster a culture of safety and readiness.

For the Institution to

- strengthen and institutionalize DRRM programs through regular drills, seminars, workshops, and hands-on activities in collaboration with agencies like NDRRMC, PAGASA, and PHIVOLCS.
- sustain the integration of DRRM concepts into the BTLEd curriculum, enhancing it with field-based learning, research, and community extension activities to give students practical experience.
- yearly update the contingency plan to both natural and man-made disaster phenomena

For the Community and Local Government Units:

- sustain the community-based DRRM programs in partnership with schools, ensuring that the students are actively involved in preparedness initiatives.
- continue the barangay-level disaster education programs and youth leadership training to encourage proactive disaster response behaviors among students.

For Future Researchers:

- explore additional factors such as risk perception, socioeconomic status, psychological resilience, and prior disaster experience to gain a deeper understanding of what influences their engagement on disaster engagement in emergency management practices.
- conduct comparative studies across different academic programs or institutions to provide broader insights into DRRM practices in higher education.

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Compliance with Ethical Standards

The authors guarantee that this study is conducted in accordance with the ethical standards of research with human subjects. During the study and before the actual data collection commenced, all participants were provided with the complete study proposal and signed an informed consent form. Consent forms in the research study were voluntary, and they were explained that they had the option to withdraw from the research study at any time and that doing so would not have any adverse effects on the study. The respondents were not recorded, and their identity was not disclosed to any third party. This study was conducted in compliance with the data privacy and confidentiality of the Data Privacy Act of 2012. All study data were collected, stored, and protected for research study purposes The respondents were treated with decency and courtesy during the study. The authors have no competing interests in the study. Proper citations were provided and plagiarism was not tolerated. The study was conducted without any biases and the interpretation of the study data was objective. The study data was used solely for academic purposes and the results were presented in an unbiased manner. Authors retain all responsibility for the content while any use of ai tools has been restricted to proofreading and editing, not substantive revisions.

REFERENCES

1. Asuncion, R., De Guzman, A., & Santos, L. (2023). University students' awareness and preparedness in disaster risk reduction and management. *International Journal of Disaster Risk Reduction, 58*, 102484. https://doi.org/10.1016/j.ijdrr.2023.102484
2. Balagtas, J., Del Rosario, M., & Luna, P. (2023). The role of DRRM resources in enhancing disaster preparedness among students. *Journal of Educational Safety and Preparedness, 12*(2), 145–162.
3. Camacho, L., & Ferrer, R. (2023). Active participation in DRRM activities and its impact on disaster preparedness. *Journal of Disaster Studies, 17*(3), 233–247.
4. Ching, S., Mateo, J., & Liwanag, K. (2023). Digital learning platforms and disaster preparedness education: An assessment of effectiveness. *Technology in Education Review, 25*(4), 189–204.
5. Demetrio, C. C., & Flores, G. T. (2025). Assessing the functionality of disaster risk reduction and management (DRRM) resources at Agusan National High School for SY 2023–2024. *International Journal of Scientific and Research Publications, 15*(5), 140–147.
6. Francisco, A., Gutierrez, M., & Reyes, T. (2024). Understanding disaster awareness among college students: A focus on common hazards. *Disaster Awareness Journal, 19*(1), 35–49.
7. Garcia, R., Santos, E., & Villanueva, G. (2024). Barriers to effective disaster preparedness education in schools. *International Journal of Educational Preparedness, 15*(2), 97–112.
8. Gonzales, M., Perez, L., & Cruz, E. (2023). The role of teacher education in disaster risk reduction and preparedness. *Education and Resilience Journal, 10*(2), 145–158.
9. International Federation of Red Cross and Red Crescent Societies. (2013). *Disaster preparedness in educational settings: A guide for schools*. IFRC.
10. Kang, J., & Lee, H. (2024). Disaster risk reduction education for future educators: A framework for resilience in the classroom. *Teacher Education and Disaster Resilience, 8*(1), 112–125.
11. Kim, S., Lee, D., & Park, J. (2023). Integrating disaster preparedness into educational curricula: A study of effectiveness. *Journal of Educational Safety, 14*(3), 102–118.
12. Lee, S., & Choi, K. (2021). The relationship between disaster awareness and preparedness behaviors among students. *Journal of Risk and Disaster Management, 9*(2), 85–99.
13. Lopez, F., & Miller, A. (2023). Teacher training for disaster risk reduction: Enhancing community preparedness through education. *Journal of Risk and Preparedness Education, 12*(4), 278–289.
14. Malto, A. (2021). Disaster risk reduction in higher education: A case study of Philippine universities. *International Journal of Disaster Risk Science, 12*(1), 45–57.
15. Martinez, J., Ortiz, P., & Rivera, C. (2024). Simulation-based learning for disaster preparedness: Implications for educational policy. *Journal of Safety and Preparedness, 15*(1), 67–83.
16. Medina, L., & Dungo, S. (2024). Simulation activities and student preparedness: A quantitative study of Philippine tertiary institutions. *Disaster Preparedness Education Review, 10*(2), 92–110.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue III, March 2026

17. Niu, Y., Zhang, Y., Song, X., & Li, J. (2025). A cross-sectional study on household disaster preparedness in China and analysis of its influencing factors. *BMC Public Health, 25*, Article 2118. https://doi.org/10.1186/s12889-025-23281- 3
18. Park, J., Kim, H., & Lee, S. (2023). Demographic factors influencing disaster awareness in university students. *Disaster Risk Management Journal, 11*(3), 185–202.
19. Patel, R., & Thomas, G. (2023). Barriers to effective disaster preparedness education: A global perspective. *Journal of Disaster Risk Education, 20*(2), 111–126.
20. Qiu, D., Lv, B., Cui, Y., & Zhan, Z. (2023). The role of response efficacy and self- efficacy in disaster preparedness actions for vulnerable households. *Natural Hazards and Earth System Sciences, 23*, 3789–3803. https://doi.org/10.5194/nhess-23-3789-2023
21. Reyes, M., Santos, A., & Cruz, J. (2023). The impact of disaster preparedness training on student resilience and response. *Educational Preparedness and Safety Review, 14*(3), 145–162.
22. Roberts, L. (2025). Technology-enhanced disaster preparedness in educational settings: A comprehensive review. *Technology and Disaster Preparedness Journal, 23*(1), 55–70.
23. Singh, P., Arora, S., & Verma, R. (2022). Disaster preparedness and response in academic institutions: Best practices and lessons learned. *Journal of Risk Management in Education, 15*(1), 78–94.
24. Smith, J., & Lee, T. (2021). The influence of teacher education on disaster preparedness in schools. *Journal of Education and Disaster Risk Management, 9*(3), 120–134.
25. Suanco, J. J., Mabuyo, A. J. M., & Dela Rosa, F. J. A. (2023). Exploring preservice teachers' concept and experience on disaster risk reduction management: The case of one teacher education institution in the Philippines. *Journal of Community Development Research (Humanities and Social Sciences), 16*(4).