Earthquake Safety Awareness, Understanding, and Performance of Duck, Cover, and Hold among Students and Teachers of Dapa National High School

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ABSTRACT

Earthquake preparedness is vital in reducing risks and enhancing the safety of school communities during seismic events. This study assessed the earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) among students and teachers of Dapa National High School during the School Year 2025–2026. A quantitative descriptive-correlational research design was employed involving 347 students selected through stratified random sampling and 40 teachers selected through convenience sampling. Data were collected using a validated researcher-made questionnaire and analyzed using frequency, percentage, mean, standard deviation, t-test, ANOVA, and Pearson Product-Moment Correlation.

The findings revealed that students demonstrated a high level of earthquake safety awareness and understanding (M = 3.28, SD = 0.68), while teachers exhibited a very high level of awareness and understanding (M = 3.63, SD = 0.514). In terms of Duck, Cover, and Hold (DCH) performance, students obtained a mean score of 3.31 (SD = 0.68), indicating moderate performance, while teachers obtained a mean score of 3.37 (SD = 0.52), also indicating moderate performance. Inferential analysis revealed significant differences in selected dimensions of students' earthquake safety awareness, understanding, and performance when grouped according to age and grade level, whereas no significant differences were found when grouped according to sex. Similarly, teachers' earthquake safety awareness, understanding, and performance showed no significant differences when grouped according to age, sex, and specialization. Furthermore, no significant relationship was found between teachers' and students' combined awareness and understanding of earthquake safety ($r = -0.137$, $p = .398$). Based on the findings, it is recommended that the school strengthen disaster preparedness programs through continuous training, regular earthquake drills, and monitoring activities to further enhance earthquake readiness and resilience among students and teachers.

Keywords: Earthquake Safety, Duck Cover and Hold (DCH), Disaster Preparedness Program, School Safety, Protection Motivation Theory.

INTRODUCTION

Earthquakes are among the most dangerous natural hazards worldwide because they occur suddenly and can cause serious injuries and loss of life. During strong ground shaking, people are at risk from falling objects, collapsing furniture, and damaged structures. To reduce injuries during earthquakes, disaster and emergency management agencies strongly recommend Duck, Cover, and Hold as an immediate and effective protective action, particularly in school settings where students are exposed to multiple hazards inside classrooms (Federal Emergency Management Agency [FEMA], 2022; United Nations Office for Disaster Risk Reduction [UNDRR], 2015). Promoting proper earthquake preparedness also aligns with Sustainable Development Goal 13 (Climate Action), which calls for urgent action to combat climate-related hazards and strengthen resilience to natural disasters (United Nations, 2023).

The Philippines is highly vulnerable to earthquakes due to its location along the Pacific Ring of Fire, where active tectonic plate boundaries generate frequent seismic activity (PHIVOLCS, 2023). Several destructive earthquakes in the country have highlighted the vulnerability of schools and the importance of disaster preparedness among learners and teachers. In response, government agencies regularly conduct earthquake drills and information campaigns in schools. However, studies and drill observations show that many students still panic, respond slowly, or perform Duck, Cover, and Hold incorrectly, raising concerns about their actual level of preparedness during real earthquake emergencies (NDRRMC, 2022; Becker et al., 2021).

Siargao Island, including the municipality of Dapa, is exposed to seismic hazards due to nearby active fault systems affecting the eastern part of Mindanao (PHIVOLCS, 2023). Despite this risk, there is limited local research that specifically examines how well students and teachers in Siargao schools perform Duck, Cover, and Hold during earthquake emergencies. Most existing research focuses on general disaster preparedness rather than examining earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) in school settings. To address this gap, the present study investigated the earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) among students and teachers of Dapa National High School, with the aim of providing evidence-based recommendations to strengthen school-based earthquake preparedness and safety.

In view of the limited local evidence on students' and teachers' earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH), this study examined the earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) among students and teachers of Dapa National High School.

METHODOLOGY

This study employed a quantitative descriptive-correlational research design to assess the earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) among students and teachers of Dapa National High School. The study involved 347 junior and senior high school students selected through stratified random sampling and 40 teachers selected through convenience sampling. Data were collected using a validated researcher-made questionnaire anchored on Protection Motivation Theory (PMT) and Behavioral Theory. The instrument demonstrated excellent internal consistency, with a Cronbach's alpha coefficient of 0.983. It measured respondents' familiarity with Duck, Cover, and Hold procedures, identification of safe locations during earthquakes, knowledge of proper posture and recommended duration, adherence to recommended safety actions, compliance with the DCH posture, and participation in earthquake drills and simulation exercises. The data were analyzed using frequency counts, percentages, mean, standard deviation, independent samples t-test, one-way analysis of variance (ANOVA), and Pearson Product-Moment Correlation.

Data gathered from the respondents were encoded, tabulated, and analyzed using appropriate statistical tools. Frequency counts and percentages were used to describe the demographic profile of the respondents. Mean and standard deviation were employed to determine the level of earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) among students and teachers. Independent samples t-test and one-way analysis of variance (ANOVA) were used to determine significant differences in earthquake safety awareness, understanding, and performance when respondents were grouped according to their demographic profile. Pearson Product-Moment Correlation was utilized to determine the relationship between earthquake safety awareness and understanding and the performance of Duck, Cover, and Hold (DCH). All statistical analyses were conducted at the 0.05 level of significance.

The study was conducted within Dapa National High School, located in the Schools Division of Siargao, Philippines. This geographic area is highly exposed to seismic hazards due to active fault systems near the Philippine Trench, providing an essential and highly relevant structural context for investigating local school-based disaster vulnerability and immediate survival actions. Strict ethical protocols, including administrative clearance, parental consent for minor students, institutional approval, and complete respondent confidentiality, were maintained throughout all phases of the investigation.

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RESULTS AND DISCUSSION

This section presents the findings of the study on the earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold (DCH) among students and teachers of Dapa National High School. The results are organized according to the statement of the problem and include the demographic profile of the respondents, their level of earthquake safety awareness and understanding, their performance of the DCH procedure, significant differences when grouped according to demographic variables, and the relationship between awareness, understanding, and performance. The findings are discussed in relation to earthquake preparedness and school-based disaster risk reduction practices.

Profile of the Respondents

Table 1. Demographic profile of the student respondents in terms of age, sex, and grade level.

Profile	Category	f	%
Age	12-13 years old	82	23.6
	14-15 years old	149	42.9
	16-17 years old	95	27.4
	18 years old and above	21	6.1
Sex	Male	147	42.4
	Female	200	57.6
Grade Level	Grade 7	74	21.3
	Grade 8	70	20.2
	Grade 9	58	16.7
	Grade 10	56	16.1
	Grade 11	49	14.1
	Grade 12	40	11.5

Table 1 presents the demographic profile of the student respondents in terms of age, sex, and grade level. Among the 347 respondents, the largest age group was 14–15 years old, comprising 149 students (42.9%), followed by those aged 16–17 years old with 95 students (27.4%). Students aged 12–13 years old accounted for 82 respondents (23.6%), while only 21 respondents (6.1%) were 18 years old and above. These findings indicate that the majority of participants were within the middle adolescent stage, which is considered an important period for developing awareness, understanding, and responsiveness to disaster preparedness measures.

In terms of sex, female students constituted the majority of the respondents with 200 participants (57.6%), whereas male students accounted for 147 participants (42.4%). The higher representation of female respondents suggests a relatively balanced distribution of participants while providing sufficient data from both sexes for comparative analysis. This distribution allows the study to examine whether familiarity and compliance with the Duck, Cover, and Hold (DCH) procedure differ according to sex.

Regarding grade level, Grade 7 students comprised the largest group with 74 respondents (21.3%), followed by Grade 8 students with 70 respondents (20.2%). Grade 9 students accounted for 58 respondents (16.7%), Grade 10 students for 56 respondents (16.1%), Grade 11 students for 49 respondents (14.1%), and Grade 12 students for 40 respondents (11.5%). The distribution demonstrates that respondents were drawn from various grade levels, providing a comprehensive representation of junior and senior high school students.

The diversity of respondents in terms of age, sex, and grade level strengthens the study by ensuring that the findings reflect the perspectives of students from different demographic backgrounds. Such representation is essential in assessing familiarity and compliance with earthquake preparedness procedures, as previous studies have suggested that disaster preparedness knowledge and safety behavior may vary according to age, educational exposure, and individual characteristics (Yeon et al., 2020; Liao et al., 2025).

Table 2: Demographic profile of the teacher's respondents in terms of age, sex, and specialization.

Profile	**Category**	**f**	**%**
Age	21-25 years old	0	0
	26-30 years old	13	35
	31-35 years old	9	22
	36-40 years old	3	7.5
	41-45 years old	6	15
	46-50 years old	2	5
	51-55 years old	3	7.5
	56-60 years old	3	7.5
Sex	Male	17	42.5
	Female	23	57.5
Specialization	English	8	20
	TLE	5	12.5
	Filipino	4	10
	Mathematics	8	20
	Science	6	15
	MAPEH	6	15
	AP/ValEd	3	7.5

Table 2 presents the demographic profile of the teacher respondents in terms of age, sex, and specialization. Among the 40 teachers who participated in the study, the largest age group was 26–30 years old, comprising 35% of the respondents, followed by those aged 31–35 years old at 22%. Smaller proportions were distributed across the older age groups, including 41–45 years old (15%), 36–40 years old (7.5%), 51–55 years old (7.5%), and 56–60 years old (7.5%). The absence of respondents in the 21–25 age bracket suggests that most

teachers had already accumulated several years of professional experience. This age distribution indicates that the teaching workforce is primarily composed of young to middle-aged professionals who are actively involved in school activities, including disaster preparedness programs and emergency response initiatives.

In terms of sex, female teachers comprised the majority of the respondents, accounting for 57.5%, while male teachers represented 42.5%. This finding reflects the common trend observed in many educational institutions where female educators outnumber their male counterparts. The representation of both sexes in the study provides a balanced perspective in assessing familiarity and compliance with the Duck, Cover, and Hold (DCH) procedure and allows for the examination of possible differences in disaster preparedness practices based on sex.

With respect to specialization, English and Mathematics teachers constituted the largest groups, each representing 20% of the respondents. Science and MAPEH teachers each accounted for 15%, while TLE teachers comprised 12.5%, Filipino teachers 10%, and AP/Values Education teachers 7.5%. The distribution of respondents across various academic disciplines demonstrates that the study gathered insights from teachers with diverse educational backgrounds and teaching experiences. Such diversity is important because disaster preparedness and earthquake safety awareness are not limited to a single subject area but are responsibilities shared by all members of the school community.

Overall, the demographic profile indicates that the respondents were composed of teachers with varied ages, specializations, and professional experiences. This diversity enhances the reliability of the study by ensuring that the assessment of familiarity and compliance with the DCH procedure reflects the perspectives of teachers from different areas of expertise. Consequently, the findings may provide a more comprehensive understanding of earthquake preparedness practices within the school setting (Razia et al., 2025; Noynay et al., 2025).

Earthquake Safety Awareness and Understanding of the Respondents

Table 3: The level of earthquake safety awareness and understanding of the students.

Indicators	**M**	**SD**	**VI**	**QD**
Familiarity with the Duck, Cover, and Hold steps	3.733	0.470	Strongly Agree	Very High Awareness and Understanding
Identification of safe locations within the classroom or school during an earthquake	3.573	0.525	Strongly Agree	Very High Awareness and Understanding
Knowledge of proper posture and recommended duration when performing Duck, Cover, and Hold	3.60	0.548	Strongly Agree	Very High Awareness and Understanding
Overall	3.63	0.514	Strongly Agree	Very High Awareness and Understanding

Table 3 presents the level of earthquake safety awareness and understanding of the student respondents in terms of familiarity with the Duck, Cover, and Hold (DCH) steps, identification of safe locations within the classroom or school during an earthquake, and knowledge of proper posture and recommended duration when performing DCH. The overall mean of 3.28 (SD = 0.68), interpreted as Agree, indicates a high level of awareness and understanding of earthquake safety among the students.

Among the indicators, familiarity with the Duck, Cover, and Hold steps obtained the highest mean (M = 3.35, SD = 0.67), suggesting that students are generally knowledgeable about the recommended actions to take during an earthquake. This indicates that most students understand the sequence and purpose of the DCH procedure as a protective measure during seismic events. Meanwhile, knowledge of proper posture and

recommended duration when performing DCH received a mean of 3.28 (SD = 0.68), while identification of safe locations within the classroom or school during an earthquake obtained the lowest mean of 3.23 (SD = 0.69). Despite being the lowest among the indicators, the result still reflects a high level of awareness and understanding.

The findings suggest that students possess a solid foundation of earthquake safety knowledge and are generally aware of appropriate protective actions during emergencies. The consistently high ratings across all indicators imply that students are familiar with essential earthquake preparedness measures and understand the importance of responding appropriately during seismic events. However, the relatively lower rating for identifying safe locations highlights the need for continued reinforcement of situational awareness and practical application of safety procedures within the school environment. Overall, the results indicate that the students are well-informed about earthquake safety practices and demonstrate a positive level of preparedness for potential earthquake occurrences (Alpar et al., 2025; Subedi et al., 2020).

Table 4: The level of earthquake safety awareness and understanding of the teachers.

Indicators	**M**	**SD**	**VI**	**QD**
Familiarity with the Duck, Cover, and Hold steps	3.35	0.67	Agree	High Awareness and Understanding
Identification of safe locations within the classroom or school during an earthquake	3.23	0.69	Agree	High Awareness and Understanding
Knowledge of proper posture and recommended duration when performing Duck, Cover, and Hold	3.28	0.68	Agree	High Awareness and Understanding
Overall:	3.28	0.68	Agree	High Awareness and Understanding

Table 4 presents the level of earthquake safety awareness and understanding of the teacher respondents in terms of familiarity with the Duck, Cover, and Hold (DCH) steps, identification of safe locations within the classroom or school during an earthquake, and knowledge of proper posture and recommended duration when performing DCH. The overall mean of 3.63 (SD = 0.514), interpreted as Strongly Agree, indicates a very high level of awareness and understanding of earthquake safety procedures among the teachers.

Among the indicators, familiarity with the Duck, Cover, and Hold steps obtained the highest mean (M = 3.733, SD = 0.470), suggesting that teachers possess a strong understanding of the recommended actions to take during an earthquake. This indicates that they are highly knowledgeable about the sequence and purpose of the DCH procedure and recognize its importance in minimizing injuries during seismic events. Knowledge of proper posture and recommended duration when performing DCH also received a high rating (M = 3.60, SD = 0.548), reflecting teachers' understanding of the correct execution of the procedure. Similarly, identification of safe locations within the classroom or school during an earthquake obtained a mean of 3.573 (SD = 0.525), indicating that teachers are highly aware of appropriate areas that can provide protection during emergencies.

The findings suggest that teachers possess a comprehensive understanding of earthquake safety measures and are well-prepared to respond appropriately during earthquake occurrences. The consistently high ratings across all indicators demonstrate that teachers are knowledgeable about essential protective actions and safety practices. As key facilitators of disaster preparedness in schools, their high level of awareness and understanding is crucial in guiding students and ensuring the effective implementation of earthquake safety protocols. Overall, the results indicate that the teachers are highly equipped with the knowledge necessary to promote a safe and prepared school environment during earthquake emergencies (Zang et al., 2024; Gulsoy et al., 2025).

Performance of Duck, Cover, and Hold among Respondents

Table 5: The level of performance of Duck, Cover, and Hold among students.

Indicators	M	SD	VI	QD
Adherence to Recommended Safety Actions	3.33	0.67	Agree	Moderate Performance
Compliance with Recommended DCH Posture	3.28	0.66	Agree	Moderate Performance
Consistency in Participation during Earthquake Drills or Simulated Exercises	3.33	0.70	Agree	Moderate Performance
Overall	3.31	0.68	Agree	Moderate Performance

Table 5 presents the earthquake safety performance of the student respondents in terms of adherence to recommended safety actions, compliance with the recommended Duck, Cover, and Hold (DCH) posture, and consistency in participation during earthquake drills or simulated exercises. The overall mean of 3.31 (SD = 0.68), interpreted as Agree, indicates a moderate level of performance among the students in carrying out earthquake safety practices.

Among the indicators, adherence to recommended safety actions and consistency in participation during earthquake drills or simulated exercises both obtained the highest mean of 3.33, with standard deviations of 0.67 and 0.70, respectively. These findings suggest that students generally follow prescribed safety measures during earthquake-related activities and actively participate in preparedness exercises conducted by the school. Such participation is important in reinforcing proper responses and promoting readiness during actual earthquake events.

Meanwhile, compliance with the recommended DCH posture obtained the lowest mean (M = 3.28, SD = 0.66), although it was still interpreted as Agree and classified under moderate performance. This result indicates that while students are generally able to perform the DCH procedure, there may be instances where proper posture and execution are not consistently observed. The finding highlights the need for continued practice and monitoring to ensure that students can correctly apply the procedure during emergencies.

Overall, the results indicate that students demonstrate a satisfactory level of earthquake safety performance. While they generally adhere to recommended safety actions, participate in drills, and comply with the DCH procedure, there remains room for improvement in achieving higher levels of consistency and accuracy in performing earthquake safety measures. Continuous reinforcement through regular drills, demonstrations, and preparedness activities may further strengthen students' practical skills and readiness during earthquake emergencies (Becker et al., 2021).

Table 6: The level of performance of Duck, Cover, and Hold among teachers.

Indicators	M	SD	VI	QD
Adherence to Recommended Safety Actions	2.91	0.518	Agree	Moderate Performance
Compliance with Recommended DCH Posture	3.57	0.553	Strongly Agree	High Performance
Consistency in Participation during Earthquake Drills or Simulated Exercises	3.63	0.499	Strongly Agree	High Performance
Overall:	3.37	0.52	Agree	Moderate Performance

Table 6 presents the level of earthquake safety performance of the teacher respondents in terms of adherence to recommended safety actions, compliance with the recommended Duck, Cover, and Hold (DCH) posture, and consistency in participation during earthquake drills or simulated exercises. The overall mean of 3.37 (SD = 0.52), interpreted as Agree, indicates a moderate level of performance among the teachers. Among the indicators, consistency in participation during earthquake drills or simulated exercises obtained the highest mean (M = 3.63, SD = 0.499), interpreted as high performance. This was followed by compliance with the recommended DCH posture (M = 3.57, SD = 0.553), also interpreted as high performance. Meanwhile, adherence to recommended safety actions obtained the lowest mean (M = 2.91, SD = 0.518), indicating moderate performance.

The findings suggest that teachers actively participate in earthquake drills and generally demonstrate proper compliance with the recommended DCH posture. Their high participation reflects their commitment to disaster preparedness and their role in ensuring school safety during emergencies. However, the relatively lower rating in adherence to recommended safety actions indicates that although teachers are knowledgeable and involved in preparedness activities, there may still be instances where some recommended safety practices are not consistently followed. This highlights the need for continuous reinforcement of earthquake safety protocols and regular training to strengthen the practical application of safety measures.

This highlights the need for continuous reinforcement of earthquake safety protocols and regular training to strengthen the practical application of safety measures, as consistent participation in drills and simulation exercises has been shown to improve preparedness, knowledge retention, and protective behaviors (Carmelotes et al., 2023; Musacchio et al., 2025).

Significant difference in the respondents' earthquake safety awareness, understanding, and performance of Duck, Cover, and Hold when grouped according to their demographic profile

Table 7: Significant Difference in Students' Earthquake Safety Awareness, Understanding, and Performance when Grouped According to their demographic profile

Subscales	Profile	F	p-value	Interpretation	Decision
FDCHS	Age	2.902	.039	Significant	Reject *H0*
ISLWCOS		6.413	<.001	Significant	Reject *H0*
KPPRDWPDCH		2.259	.087	Not Significant	Fail to Reject *H0*
ARSAA		1.242	.300	Not Significant	Fail to Reject *H0*
CRDP		0.468	.705	Not Significant	Fail to Reject *H0*
CPDEDSE		1.756	.162	Not Significant	Fail to Reject *H0*
FDCHS	Sex	0.915	.441	Not Significant	Fail to Reject *H0*
ISLWCOS		0.052	.090	Not Significant	Fail to Reject *H0*
KPPRDWPDCH		-0.774	.959	Not Significant	Fail to Reject *H0*
ARSAA		-0.705	.622	Not Significant	Fail to Reject *H0*
CRDP		-0.798	.603	Not Significant	Fail to Reject *H0*
CPDEDSE		-0.583	.192	Not Significant	Fail to Reject *H0*
FDCHS	Grade level	5.81	<.001	Significant	Reject *H0*

ISLWCOS		8.45	<.001	Significant	Reject *H0*
KPPRDWPDCH		4.45	<.001	Significant	Reject *H0*
ARSAA		2.10	.069	Not Significant	Fail to Reject *H0*
CRDP		1.59	.166	Not Significant	Fail to Reject *H0*
CPDEDSE		3.10	.011	Significant	Reject *H0*

Table 7 presents the test of difference in the earthquake safety awareness, understanding, and performance subscales of students when grouped according to grade level. The results showed significant differences in FDCHS ($F = 5.81$, $p < .001$), ISLWCOS ($F = 8.45$, $p < .001$), KPPRDWPDCH ($F = 4.45$, $p < .001$), and CPDEDSE ($F = 3.10$, $p = .011$); thus, the null hypothesis was rejected for these subscales. Meanwhile, ARSAA ($F = 2.10$, $p = .069$) and CRDP ($F = 1.59$, $p = .166$) yielded no significant differences, resulting in failure to reject the null hypothesis. These findings indicate that students' grade level significantly affects selected dimensions of earthquake safety awareness, understanding, and performance.

This implies that differences in educational exposure and learning experiences across grade levels may influence students' preparedness and understanding of earthquake safety. Students in higher grade levels may have greater opportunities to participate in disaster-related discussions, safety drills, and preparedness activities, which could contribute to higher awareness and performance levels. However, the absence of significant differences in some subscales suggests that certain dimensions of earthquake preparedness remain consistent regardless of grade level.

These findings are supported by previous literature emphasizing that educational progression and school-based disaster education contribute to increased disaster awareness and preparedness among students. Studies indicate that exposure to structured disaster risk reduction programs enhances students' understanding of emergency response and encourages safer behavior during disaster situations (Beltran et al., 2025).

Table 8: Significant Difference in Teachers' Earthquake Safety Awareness, Understanding, and Performance when Grouped According to their demographic profile

Subscale	Profile	F	p-value	Interpretation	Decision
FDCHS	Age	0.150	.982	Not Significant	Fail to Reject *H0*
ISLWCOS		0.206	.963	Not Significant	Fail to Reject *H0*
KPPRDWPDCH		0.340	.894	Not Significant	Fail to Reject *H0*
ARSAA		0.340	.894	Not Significant	Fail to Reject *H0*
CRDP		0.605	.722	Not Significant	Fail to Reject *H0*
CPDEDSE		0.398	.857	Not Significant	Fail to Reject *H0*
FDCHS	Sex	0.312	.757	Not Significant	Fail to Reject *H0*
ISLWCOS		-0.490	.627	Not Significant	Fail to Reject *H0*
KPPRDWPDCH		-0.032	.974	Not Significant	Fail to Reject *H0*
ARSAA		-1.321	.194	Not Significant	Fail to Reject *H0*

CRDP		-0.769	.446	Not Significant	Fail to Reject *H0*
CPDEDSE		-1.061	.295	Not Significant	Fail to Reject *H0*
FDCHS	Specialization	0.348	.898	Not Significant	Fail to Reject *H0*
ISLWCOS		0.577	.742	Not Significant	Fail to Reject *H0*
KPPRDWPDCH		0.691	.662	Not Significant	Fail to Reject *H0*
ARSAA		0.677	.672	Not Significant	Fail to Reject *H0*
CRDP		0.616	.714	Not Significant	Fail to Reject *H0*
CPDEDSE		1.034	.452	Not Significant	Fail to Reject *H0*

Table 8 also presents the test of difference in the earthquake safety awareness, understanding, and performance subscales of teachers when grouped according to specialization. The results revealed no significant differences across all subscales, namely FDCHS ($F = 0.348$, $p = .898$), ISLWCOS ($F = 0.577$, $p = .742$), KPPRDWPDCH ($F = 0.691$, $p = .662$), ARSAA ($F = 0.677$, $p = .672$), CRDP ($F = 0.616$, $p = .714$), and CPDEDSE ($F = 1.034$, $p = .452$). Since all obtained p-values were greater than the level of significance, the null hypothesis was not rejected.

The findings suggest that teachers demonstrate relatively similar levels of earthquake safety awareness, understanding, and performance regardless of specialization. This may be attributed to school-wide implementation of disaster preparedness programs, standardized emergency response training, and institutional safety policies that provide equal learning opportunities for all teachers regardless of subject area.

These findings align with existing literature indicating that disaster preparedness among educators is generally influenced by institutional initiatives, professional development opportunities, and participation in school safety programs rather than academic specialization. Continuous disaster preparedness activities promote consistent awareness and readiness among teachers across different teaching fields (Sonmez et al., 2023; Recamadas et al., 2023).

Significant Relationship between Students' and Teachers' Awareness and Understanding of Earthquake Safety and Their Performance of Duck, Cover, and Hold (DCH)

Table 9: Correlation between Teachers' and Students' Combined Awareness and Understanding of *Earthquake Safety*

Subscale		r	p-value	Interpretation	Decision
Teachers	Students	-0.137	.398	Not Significant	Fail to Reject *H0*

Table 9 presents the correlation between teachers' and students' combined awareness and understanding of earthquake safety. The results revealed a correlation coefficient of $r = -0.137$ with a p-value of 0.398. The negative value of the correlation coefficient indicates an inverse relationship between the awareness levels of teachers and students; however, the relationship is very weak. Furthermore, the obtained p-value is greater than the 0.05 level of significance, suggesting that the correlation is not statistically significant.

The findings imply that the combined awareness and understanding of earthquake safety among teachers are not significantly associated with those of students. This means that higher awareness levels among teachers do not necessarily correspond to higher awareness levels among students, and vice versa. Since the relationship was found to be weak and statistically insignificant, other factors may influence students' earthquake safety

awareness, such as personal experiences, school programs, family influence, and access to disaster preparedness information.

The result is consistent with previous studies emphasizing that disaster preparedness awareness is influenced by multiple factors beyond teacher knowledge alone. According to the United Nations Office for Disaster Risk Reduction (UNDRR), effective disaster education requires a whole-school approach that includes active participation, regular drills, community involvement, and continuous learning opportunities. Similarly, studies on disaster preparedness have shown that students' awareness and understanding are strengthened through experiential learning and repeated safety exercises rather than solely through teacher knowledge. These findings suggest that improving earthquake safety awareness among students requires collaborative efforts involving teachers, school administrators, families, and disaster management programs (Subedi et al., 2020).

Proposed School-Based Emergency Preparedness Program

The Proposed School-Based Emergency Preparedness Program, titled the Enhanced Earthquake Preparedness and Safety Program (EEPSP), is derived directly from the results of this study to address the disaster readiness needs at Dapa National High School. The findings revealed that although both students and teachers demonstrated favorable levels of awareness and understanding of earthquake safety procedures, and positive performance of Duck, Cover, and Hold (DCH), continuous earthquake preparedness initiatives remain necessary to sustain and further improve safety practices. This necessity is underscored by the significant differences found in selected dimensions of students' performance of Duck, Cover, and Hold (DCH) when grouped according to age and grade level, as well as the non-significant relationship between their combined awareness and actual behavioral performance. Serving as an institutional framework for strengthening disaster preparedness and promoting a culture of safety and resilience within the school community, the program primarily targets junior and senior high school students across all grade levels alongside the teaching staff across different specializations.

The operational guidelines of the program are structured into a chronological matrix of activities integrated into the academic year, executing the step-by-step framework as follows:

Step 1: Foundational Awareness (Every Semester): Run recurring earthquake safety seminars and orientations to continuously enrich the safety knowledge and procedural awareness of the DRRM Coordinator, teachers, and students.

Step 2: Technical Mastery (Quarterly): Facilitate targeted demonstration and practical training on proper Duck, Cover, and Hold procedures to improve technical compliance and correct execution of DCH postures among students and personnel.

Step 3: Behavioral Simulation (Quarterly): Implement regular, synchronized school-wide earthquake drills and simulation exercises to transition immediate protective responses into automated habits, led by the School Administration and the DRRM Team.

Step 4: Spatial Security (Beginning of Every School Year): Execute comprehensive school hazard mapping and evacuation route orientations to enhance the identification of safe locations and emergency procedures.

Step 5: Disaster Resilience Promotion (Annually): Organize school-wide Disaster Preparedness Week activities, contests, and information campaigns involving all stakeholders to cultivate a lasting culture of institutional safety.

Step 6: Monitoring and Evaluation (After Every Drill): Conduct practical post-drill evaluations and feedback sessions to assess the performance of Duck, Cover, and Hold (DCH) among the participants, allowing the DRRM Coordinator, teachers, and school administration to secure data-driven adjustments and continuous program improvement.

CONCLUSION

Based on the findings of the study, it was concluded that students and teachers of Dapa National High School demonstrated favorable levels of earthquake safety awareness and understanding, indicating that they possess adequate knowledge of earthquake safety procedures, particularly the proper execution of Duck, Cover, and Hold (DCH). The respondents also exhibited positive earthquake safety responses as reflected in their adherence to recommended safety actions, compliance with proper DCH posture, and consistent participation during earthquake drills and simulated exercises, suggesting satisfactory preparedness during earthquake emergencies. Furthermore, selected demographic factors such as age and grade level influenced certain aspects of students' earthquake safety practices, while teachers' preparedness remained relatively consistent regardless of their demographic characteristics. The study also revealed that awareness and understanding were not significantly related to the respondents' earthquake safety responses, implying that actual performance may be influenced by other factors such as training, experience, and repeated practice. Therefore, continuous implementation of school-based earthquake preparedness initiatives is necessary to further strengthen the disaster resilience and safety practices of students and teachers.

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