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Families' Earthquake Preparedness and Practices Before, During and After an Earthquake

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Abstract: *With Philippines being prone to earthquake, Ong (2021) recommended to educate Filipinos on various earthquake preparedness measures. This study aims to craft an action plan that addresses the weaknesses of the families on the identified earthquake preparedness survey. This study was conducted on 607 families catered for by the SDRRM-CNHS utilizing a DepEd questionnaire on Family Earthquake Preparedness. The data gathered underwent the following statistical treatment: mean, standard deviation, frequency, and percentage. Based on the results of the study, families graded themselves to be highly prepared on the things to do before, during and after an earthquake. Many of the families show readiness and preparedness for earthquakes as they have planned things before, during and after an earthquake. However, still a small portion of the samples are unaware of basic preparedness procedures such as Duck, Cover and Hold. With these results, it is recommended to follow the action plan of the study that is to be included in the activities of the SDRRM-CNHS and all other subjects where integration can be done. Proper and multimodal dissemination of the information is recommended, too.*

Keywords: ***Family, Earthquake, Preparedness, Practices***

1. INTRODUCTION

Every month of July, National Disaster Consciousness is being observed (DepEd, 2015). One of the most common disasters encountered by the Philippines is the earthquake. With that, the Department of Education (DepEd) promotes Family Earthquake Preparedness to all elementary and secondary schools. It is mandated that all schools be able to accomplish the preparedness survey in the first month of the school year.

In line with that, DepEd aligns their activities with the Office of the Civil Defense (OCD). Partnerships are seen through the participation of DepEd schools in Nationwide Simultaneous Earthquake Drill (NSED) that is done quarterly throughout the year. Even when the pandemic hit, the practice of such drill was not hampered. Online activities were conducted to make people remain prepared for the occurrence of an earthquake. Drills are done at home and at their own workplaces.

With all that, it is expected that families catered for by the SDRRM-CNHS are knowledgeable and prepared for an earthquake. In addition, Ong et al. (2021) have noticed the lack of studies on Filipino's preparedness in natural calamities such as earthquakes. Hence, this study was conducted to identify the level of preparedness and practices of the families before, during and after an earthquake.

2. LITERATURE REVIEW

Earthquake. According to National Aeronautics and Space Administration (NASA, 2021), an earthquake is a sudden, rapid, and intense shaking of Earth's surface caused by movements in Earth's outermost layer. This can cause damage to infrastructures; disrupt gas, electric, and phone service; and sometimes trigger landslides, avalanches, flash floods, fires, and huge, destructive ocean waves or tsunamis (US Department of Labor, n.d.).

As of the writing of this paper, a total of 6975 earthquakes with a magnitude of four or above have struck within 300 kilometers of the Philippines in the past 10 years. This boils down to an average of 697 earthquakes per year or 58 per month. On average, the Philippines is hit by an earthquake roughly every 12 hours (Earthquakelist.org, n.d.). In CALABARZON, a total of 1060 earthquakes with a magnitude of four or above have struck within 300 kilometers in the past 10 years. This is 106 earthquakes on average per year, or 8 per month. It is estimated that an earthquake will hit near CALABARZON roughly every 3 days (Earthquakelist.org, n.d.). Meanwhile, Batangas province has a total of 890 earthquakes with a magnitude of four or above that have struck within 300 kilometers in the past 10 years. This is 89 earthquakes annually, or 7 per month. On average, an earthquake will hit near Batangas roughly every 4 days (Earthquakelist.org, n.d.). This shows the vulnerability of the province when it comes to earthquakes and the need to prepare for such an event.

Earthquake Preparedness. Earthquake preparedness involves the measures taken by an individual or institution to minimize the effects of an earthquake (Joffe, et al., 2016).

The Department of Science and Technology - Philippine Institute of Volcanology and Seismology (DOST-PHIVOLCS) reminded the public that those active faults that has no historical surface-rupturing events have high potential to generate huge earthquakes called "The Big One". With that, PHIVOLCS asks everyone to prepare for it through

participation in the Quarterly Nationwide Simultaneous Earthquake Drill (NSED) which promotes earthquake awareness and preparedness among members of the community (DOST-PHIVOLCS, 2019). Schools participate in these events.

As education is one of the most powerful tools to instill earthquake preparedness, Ong et al. (2021) recommended educating Filipinos on the things they need to do before, during, and after an earthquake must be done. In addition, it is necessary for Filipinos to be aware of the danger and casualties it may cause for them to willingly prepare.

Research Questions

This study generally aims to craft a project plan for earthquake preparedness of the families catered for by the SDRRM-CNHS.

Specifically, this study seeks to answer the following questions:

1. What is the family's level of earthquake preparedness before, during, and after?
2. What are the families' earthquake preparation and practices:
   2.1. before,
   2.2. during, and
   2.3. after?
3. What output can be derived from the results of the study?

Scope and Limitation

This study covers the 607 learners of Cuenca National High School for the school year 2022-2023 who were able to accomplish the survey in an online format. The limitation of this study is the responses of the respondents which may have changed over time.

3. RESEARCH METHODOLOGY

The study utilized quantitative research design. This design was deemed to be the most appropriate in this study as it provides more valid and reliable data which is based on the attempt to determine the relationship between two or more variables (Grand Canyon University, 2021). This method enabled the researcher to describe and measure the level of earthquake preparedness and frequency of their practices before, during and after an earthquake.

The respondents of the study were the 607 learners of Cuenca National High School. Samples were taken through simple random sampling to attain accurate representation of the population.

Confidentiality of the respondents and their responses was primarily considered through informing the School Head about the conduct of the study. Upon granting the permission, parents were informed about the study through a message sent on their specific Facebook messenger group chats. They are given the chance to agree and disagree to participate in the study. All responses were treated following the Data Privacy Act of 2012.

The study utilized a validated questionnaire from the Department of Education. The researcher will use a three-part questionnaire as instrument for data gathering and will be answered individually by the household-respondents. Responses are scored using the scale continuum that follows and corresponding verbal interpretations were used.

Table 1.
Interpretation of Results

Option	Scale Range	Verbal Interpretation
5	4.20 – 5.00	Very High Level
4	3.40 – 4.19	High Level
3	2.60 – 3.39	Neutral
2	1.80 – 2.59	Low Level
1	1.00 – 1.79	Very Low Level

The data gathered were sorted, tabulated, and summarized using tables. Statistical treatments applied were weighted mean, ranking, verbal interpretation, and chi-square.

Mean. This is used to get the average of the responses on the level of the earthquake preparedness.

Standard Deviation. This is used to determine the distance of the responses from the mean.

Frequency. This is used to identify the quantity of responses on certain criteria on practices before, during and after an earthquake.

Percentage. This is used to determine the number of quantities from the total.

4. DISCUSSION OF RESULTS AND RECCOMENDATIONS

The study showed the following results and their interpretation.

4.1 Level of Earthquake Preparedness

As assessed by the families, their level of preparedness is reflected in Table 2.

Table 2.
Level of Preparedness

Areas	Mean	SD	Verbal Interpretation
Before	3.90	1.06	High Level

During	3.80	1.07	High Level
After	3.92	1.15	High Level
	3.88	**1.09**	**High Level**

The respondents have a high level of earthquake preparedness based on their own assessment. Their preparedness is at the highest after an earthquake and lowest during the occurrence of such an event. It is notable to see those responses a point away from the mean based on their standard deviation. This implies that their responses are lower or higher by one which some respondents rate their preparedness lower than the average of the entire sample. This is quite alarming since preparedness has long been instilled to Filipino families through various platforms and media.

4.2 Families Earthquake Preparation

Before an earthquake

The following tables show the practices of families before an earthquake.

Table 3.
Knows Essential Emergency Hotlines

Response	Frequency	Percentage
Yes	503	83%
Not sure	63	10%
No	41	7%
TOTAL	**607**	**100%**

Table 3 shows that the families know the emergency numbers and contact details of the local fire department, police, hospitals, and barangay officials that they may be able to contact in times of emergencies. Though 83% had these numbers, still few of the families do not know these numbers.

Table 4.
Knows Nearest Safe Evacuation Area

Response	Frequency	Percentage
Yes	591	97%
Not sure	11	2%
No	5	1%
TOTAL	**607**	**100%**

In the event of an earthquake, 97% of the learners and their families know where the nearest safe evacuation area from their house as seen in table 4. However, still a percentage is unknown of evacuation area.

Table 5.
Knows Earthquake Evacuation Plan

Response	Frequency	Percentage
Yes	556	92%
No	11	1%
Not sure	40	7%
TOTAL	**607**	**100%**

Evacuation plan at the school is known to the 92% of the learners and their families. However, there is still a small percentage of them that are unaware of the plan which needs to be educated by the SDRRM-CNHS.

Table 6.
Knows Evacuation of Children and Elderly

Response	Frequency	Percentage
Yes	584	96%
No	6	1%
Not sure	17	3%
TOTAL	**607**	**100%**

As infants, children, persons with disabilities, and elderlies are vulnerable during emergencies, their evacuation is utmost priority. Table 6 shows the families' knowledge on evacuation of the vulnerable. Ninety-six percent of them are knowledgeable but a small percentage of them are still unaware and have no idea of the way to do it.

Table 7.
Knows Duck, Cover and Hold

Response	Frequency	Percentage
Yes	603	99%
Not sure	4	1%
TOTAL	**607**	**100%**

Ninety-nine percent of the families knew the Duck-Cover-Hold as an initial response during earthquake. This is a good sign that the role of SDRRM-CNHS in educating them about the things to do during earthquakes are being transferred at home. However, a small number of them are still unfamiliar of the duck, cover and hold which is unforeseen as this drill has been done since pre-school. This puts the SDRRM-CNHS in the challenge to educate the remaining percentage about the said activity with accuracy.

Table 8.
Cabinets Free from Harm

Response	Frequency	Percentage
Yes	547	90%
No	42	7%
Not sure	18	3%
TOTAL	**607**	**100%**

With hazards all around, it is asked if overhead shelves/cabinets at home are free of heavy objects that may injure people during an earthquake since it may fall and cause even more harm. It is good to see that 90% of them cleared their shelves and cabinets of harm. Although 7% still allow heavy objects to stay atop their shelves, which is dangerous for them. It is hoped by the SDRRM-CNHS that it will be cleared and removed as soon as possible.

Table 9.
Heavy equipment and Appliances bolted to the Wall

Response	Frequency	Percentage
Yes	420	69%
No	167	28%
Not sure	20	3%
TOTAL	**607**	**100%**

As objects, furniture, and appliances tend to move and shake during earthquakes, it is asked if they are strapped/bolted to the walls/floor. Table 9 shows that many families are not securing their heavy appliances well although 69% answered that they have mounted it properly and securely. This number of families are prone to injuries when these appliances and furniture fall during an earthquake.

Table 10.
Stored Food and Water for Emergencies

Response	Frequency	Percentage
Yes	575	95%
No	23	4%
Not sure	9	1%
TOTAL	**607**	**100%**

Part of the LIGTAS Bag, mandated for the families and learners to have at home and at school, are food and water. When asked if they have stored them, 95% answered yes, which indicates that they have their LIGTAS Bags ready. Yet, 4% are not joining in the preparedness activity, which is alarming as they are unaware of the contents of the LIGTAS Bag or probably totally uninformed about having such at home as preparation when disaster strikes.

Table 11.
Bodies of Water Nearby

Response	Frequency	Percentage
Yes	552	91%
No	34	6%
Not sure	21	3%
TOTAL	**607**	**100%**

Cuenca, being situated within mountains and forest, is home to various sources of water. It is seen in table 11 that only 91% of the families knew. Some families live near the bodies of water too. This is both a blessing and bane to the occupants as it may cause harm or bring safety to them during earthquake. It can cause tsunami or be source of water when supply is depleted; hence, familiarizing with the bodies or sources of water nearby is a way to prepare for situations that may arise. Having a detailed map of the town could be helpful.

Table 12.
Vulnerability to Tsunamis

Response	Frequency	Percentage
Yes	554	91%
No	23	4%
Not sure	30	5%
TOTAL	**607**	**100%**

In connection with table 11, those who knew about the nearby bodies of water also knew their vulnerability to tsunamis caused by an earthquake. In Cuenca, only 2 barangays are vulnerable to such but evacuation in these barangays is too difficult due to the trek to reach it. Hence, planning on the possible actions to execute is an advantage. However, a small number of families are still unaware of their geographical location and have less to no idea of their vulnerability to tsunami.

During an earthquake

In the event of an earthquake, families are asked about what they do. Their responses are presented below.

Table 13.
Earthquake during Travelling

Response	Frequency	Percentage
Stop and look for a safe area	536	88%
Don't panic and Do the DCH	56	9%
Call for help	15	2%
TOTAL	**607**	**100%**

Table 13 shows what these families' response when they feel an earthquake while travelling. Eighty-eight percent of them responded that they must stop what they are doing and look for a safe area to run to. For families, travelling means riding a car. Hence, they responded to stop the car and proceed to a safe space. The duck, cover, and hold are done afterwards. These two should be done together. The first response must be looking for sturdy furniture that can cover them while executing the duck, cover, and hold. But in this study, families' initial reaction is to safety. They want to look for a safe place first.

Table 14.
Initial Response when Earthquake Happens at Home

Response	Frequency	Percentage
DCH	570	94%
Go outside	23	4%
Stay calm	14	2%
TOTAL	**607**	**100%**

If situated at home, families' reaction is to conduct the duck, cover, and hold with 94% of them doing it. Four percent of them ran outside before conducting the duck, cover and hold while the remaining percentage responded with tranquility.

Table 15.
Evacuation when Earthquake happens at Home

Response	Frequency	Percentage
Calmly proceed to the nearest evacuation center	558	92%
Call for rescue	14	2%

Calmly proceed to open space nearby	35	6%
TOTAL	**607**	**100%**

If evacuation is needed during an earthquake, 92% of the participants answered that they will calmly proceed to the nearest evacuation center to them. Others will proceed to the nearby open space while some will immediately call for rescue.

Table 16.
Meeting During Earthquake

Response	Frequency	Percentage
Evacuation center	294	48%
Designated place	149	25%
Nearest safe space	164	27%
TOTAL	**607**	**100%**

When not at home and outside, the reunification plan of 48% of the families is to meet at the designated evacuation center. Meanwhile, 27% of them will meet at the nearest safe space from their home. For 25% of them, an assigned place to go known to every member of the household is the choice of meeting.

Table 17.
When Injury Took Place During Earthquake

Response	Frequency	Percentage
First aid	426	70%
Call for help	71	12%
Bring to the nearest hospital	110	18%
TOTAL	**607**	**100%**

Injuries are not uncommon during emergencies, hence 70% of the families giving first aid is their initial response if someone in the household is injured. Eighteen percent of them will take the injured immediately to the hospital. While 12% will call for help from knowledgeable people. Although the last two must be done, having the ability to apply first aid is an advantage in such a situation.

Table 18.
What to Do when Trapped Inside the House

Response	Frequency	Percentage
Call for rescue using whistle or by making noise	560	93%
Call for help using phones	32	5%
Others	15	2%
TOTAL	**607**	**100%**

The participants are asked what to do when trapped inside the house during earthquake. It is surprising that they have learned about maximizing the whistle and other noise-producing materials to avoid exhaustion from shouting. Others recommended the usage of emergency hotlines through call which may be difficult when communication lines are down. Some still wrote that they'll just do the duck, cover, and hold until rescue arrives or even shout so they can be heard. Still, many of them need education on proper strategy when trapped.

Table 19.
Alternative Evacuation Area

Response	Frequency	Percentage
Open space	411	68%
School	130	21%
Others (Church, Covered Court, Playground, Gym, etc.)	66	11%
TOTAL	**607**	**100%**

During an earthquake, untoward incidents may happen such as destruction of the designated evacuation area. When asked where to go as an alternative evacuation area, 68% said that they'll proceed on the nearest open space. Twenty-one percent identified schools as alternative evacuation areas while 11% will proceed to other public places like churches, gymnasiums, playground, etc.

Table 20.
Waiting Time to the Designated Meeting Place

Response	Frequency	Percentage
Depends on the arrival	284	47%
0-5 hrs	274	45%
6 hrs to 1 day	49	8%
TOTAL	**607**	**100%**

Communication lines might be affected during earthquakes which in turn might hamper the delivery of essential information between parties. Hence, families are asked about the time they will wait to meet each other in the designated place. Forty-seven percent of the participants answered that it depends on the arrival of their members. This gives indefinite waiting time for them. Forty-five percent gave 0-5 hours waiting once the disaster had calmed down. This is a short waiting time but enough for learners and families within the district. The rest gave a day for waiting of their family members in the designated meeting place.

After an earthquake

After an earthquake, families are asked questions on how to proceed with their next moves.

Table 21.
Knows the Contact Numbers in Their Households

Response	Frequency	Percentage
Yes	600	98.85%
No	2	0.33%
Not sure	5	0.82%
TOTAL	**607**	**100%**

Table 21 shows that 98.85% of the participants are knowledgeable of the contact details of their household members. There is still a small number unfamiliar with these numbers or they don't remember the numbers at all.

Table 22.
Knows When to Evacuate

Response	Frequency	Percentage
Yes	590	97.20%
No	6	0.99%
Not sure	11	1.81%
TOTAL	**607**	**100%**

When asked if they know when to evacuate, 97.20% said yes. This gives them the decision on their own to evacuate without depending on the announcements of authorities. This provides an immediate solution to their current situation. Others are not sure when to evacuate and depend on authorities to tell them.

Table 23.
Knows Not to Go Back to Homes

Response	Frequency	Percentage
Yes	590	97.20%
No	8	1.32%
Not sure	9	1.48%
TOTAL	**607**	**100%**

Based on table 23, 97.20% of the families knew that they should not go back to their homes immediately due to possible effects of aftershocks. The other 1.32% and 1.48% are unaware and risk themselves in doing so.

Table 24.
Prepared with Effects of Aftershocks

Response	Frequency	Percentage
Yes	537	88.47%
No	25	4.12%
Not sure	45	7.41%
TOTAL	**607**	**100%**

Asked about the preparedness on the possible effects of aftershocks such as fires, further damage to house/building, 88.47% of the families answered yes. This implies that families are knowledgeable about the other effects of aftershocks and give them the ability to apply preventive measures. However, it is disheartening to see that 4.12% and 7.41% of them are unaware of the dangers.

Table 25.
Home Free from Possible Fire-triggers

Response	Frequency	Percentage
Yes	492	81.05%
No	45	7.41%
Not sure	70	11.53%
TOTAL	**607**	**100%**

Home being where safety must always be free from dangers. Families are asked about possible fire-triggers after an earthquake. About 81.05% said that they are free from such triggers. This gives the overview that learners' homes are properly arranged with correct protection from fires. Yet still 7.41% and 11.53% are vulnerable to fire and have no fire-proofing design.

Table 26.
Knows Evacuation During Tsunamis

Response	Frequency	Percentage
Yes	522	86.00%
No	18	2.97%
Not sure	67	11.04%
TOTAL	**607**	**100%**

With a small number of families residing near bodies of water, it is a good scenery that 86% are knowledgeable of the proper evacuation. However, 2.97% and 11.04% remain unfamiliar with the evacuation procedure and need more education on that.

Table 27.
Knows Food Preservation

Response	Frequency	Percentage
Yes	548	90.28%
No	19	3.13%
Not sure	40	6.59%
TOTAL	**607**	**100%**

It can be gleaned from table 27 that many of the families are familiar with the food preservation process after an earthquake. This implies that they can store food and drinks safely even after calamities when such necessities are unsafe. Although, 3.13% and 6.69% are unaware of these preservation techniques and vulnerable to spoilage and contamination.

Table 28.
Knows How to Validate Information

Response	Frequency	Percentage
Yes	596	98.19%
No	1	0.16%
Not sure	10	1.65%
TOTAL	**607**	**100%**

With calamities around, information becomes more dangerous when shared inaccurately. With that, families are asked as to their ability to get accurate and credible data/information so as not to contribute to false rumors which may cause panic during earthquakes. It is notable that 98.19% of them have such a source. However, 0.16% and 1.65 are struggling as to where to get such information.

4.3 Output of the Study

The output of this study is based on the weakness of their responses. With the SDRRM-CNHS's desire to create a disaster-ready citizen, an action plan was crafted. This action plan aims to sustain the good practices of the families when it comes to dealing with earthquakes and to educate those groups who are ill-informed and unaware of the practices before, during and after an earthquake. This plan is in consonance with the activities of the SDRRM-CNHS.

Strengthening Earthquake Preparedness

KRA	Target	Procedure	Persons Involved	Criteria for Outcome Evaluation
BEFORE	Familiarize with the emergency numbers and contact details of the local fire department, police, hospitals, and barangay officials	1. Have a copy of the emergency hotlines in the entire community. 2. Disseminate copies of emergency hotlines across various platforms.	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Copies of Emergency hotlines
	Familiarize with the nearest safe evacuation area from specific houses in the event of an earthquake	1. List and maps of evacuation areas in the community 2. Contact details of the evacuation areas	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Evacuation Areas' maps
	Familiarize with the earthquake evacuation plan at school	1. Posting of the school evacuation plan 2. Discussion of the school's evacuation plan through various media	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	School's Earthquake Evacuation Plan
	Familiarize on how to evacuate infants/ children, persons with disabilities, and/or the elderly	1. Attending seminars on handling vulnerable groups in the occurrence of calamities. 2. Posting of information on the evacuation of the vulnerable groups	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochures or info-videos on Evacuating Vulnerable groups under emergency situations
	Know initial response during an earthquake (Duck-Cover-Hold)	1. Practice and evaluation of the duck, cover, and hold	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Duck, cover and hold documentation report
	Have overhead shelves/cabinets at home free of heavy objects that may injure people	1. Reminding on the need to remove heavy objects that may fall during earthquake. 2. Risk assessment at home	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochure or info-video on the danger of placing heavy objects atop cabinets and shelves
	Have heavy furniture, cupboards, and other heavy appliances strapped/ bolted to the walls/floor	1. Recommending furniture and appliances to be strapped or bolted to the walls or floor.	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Photo documentation on bolting or strapping furniture to their places
	Know food and drinking water storage procedure	1. Attending seminar on the proper food and water storage	SDRRM-CNHS, Personnel and staff, Familie	Brochure or info-video on food and water storage

		during disaster 2. Reading or watching tips on how to store foods and drinks	s, Learners, and Community	
	Familiarize nearby bodies of water (e.g. lake, sea, river, etc.)	1. Familiarizing the bodies of water within the entire town and barangay map	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Town and barangay map
	Familiarize areas vulnerable to possible tsunamis	1. Familiarizing the tsunami hazard map of the barangay's prone to such	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Town and barangay hazard map
DURING	Plan for initial response when earthquake happens while travelling	1. Familiarity with the things to do during earthquake when travelling	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochure or info-video on things to do during earthquake when travelling
	Have a plan on the initial response when earthquake happens while at home	1. Familiarity with the responses when earthquake happens at home. 2. Practice of the responses	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Initial response plan when at home during earthquake
	Familiarize with the evacuation procedure when at home	1. Familiarity with the evacuation plan at home 2. Practice of the evacuation plan at home	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Home evacuation plan
	Plan meeting place when members are traveling or not at home	1. Designation of meeting places when traveling 2. Practice drill on travelling to the designates meeting place	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Meeting place plan
	Familiarize with initial response when injury happens in the household	1. Attending seminar on applying first aid. 2. Practice or simulate the application of the first aid	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	First aid seminar attendance
	Know the process when trapped inside the house	1. Familiarity with the responses when trapped at home during an earthquake. 2. Practice drill when trapped at home	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochure or info-video on the use of whistle and other noise-producing materials when trapped
	Plan for an alternative evacuation area when designated evacuation	1. Determine alternative evacuation areas. 2. Craft a map or list of alternative	SDRRM-CNHS, Personnel and staff, Familie	List of alternative evacuation areas in the town

	area is damaged	evacuation areas	s, Learners, and Community	and barangay
	Plan for waiting time in the designated evacuation area when communication lines are down	1. Discussion on the length of the waiting time for family members	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Recommended waiting time
AFTER	Familiarize with the contact details of all the members of the household	1. List down the contact details of the household members 2. Have a copy all the time of the contact details	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Directory of the learners contact details and their household
	Have a plan on when to evacuate after the calamity	1. Familiarize with the standard evacuation plan of the community with number of minutes before evacuation. 2. Practice the evacuation plan.	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Community evacuation plan
	Educate selves about the possible effects of aftershocks before entering the house	1. Attending seminar on the effects of aftershocks to infrastructure after an earthquake	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochure or info-video on the effects of aftershocks
	Have plan on the possible effects of aftershocks such as fires, further damage to house/building	1. Attending seminar on the effects of aftershocks to appliances and other contents of the house after an earthquake	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochure or info-video on the effects of aftershocks
	Mitigate the possible fire-triggers at home	1. Identify the possible fire-triggers after an earthquake. 2. Mitigate the possible fire-triggers at home	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	List of sample fire-triggers at home
	Have evacuation plan for tsunamis	1. Familiarize with the evacuation plan during tsunamis. 2. Practice tsunami evacuation drills	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Tsunami's Evacuation Plan
	Familiarize with food preservation techniques after disasters	1. Familiarize with food preservation techniques	SDRRM-CNHS, Personnel and staff, Families, Learners, and Community	Brochure or info-video on food preservation
	Have sources of accurate and credible data/ information	1. Determine the sources of accurate, credible, and reliable information.	SDRRM-CNHS, Personnel and staff, Families, Learners, and	List of sources of accurate, credible, and reliable information

			Community	
	Evaluation of the Project	The SDRRM-CNHS will conduct a review and evaluation of the project	SDRRM Coordinator	Evaluated Wok and Action Plan

5. CONCLUSION AND RECOMMENDATIONS

Based on the results of the study, the following conclusions were derived. Firstly, families graded themselves to be highly prepared on the things to do before, during and after an earthquake. These are seen on the results on the how they answered the criteria related to preparedness before, during and after an earthquake. Lastly, many of the families show readiness and preparedness for earthquakes as they have planned things before, during and after an earthquake. However, still a small portion of the samples are unaware of basic preparedness procedures such as Duck, Cover and Hold.

With these results, it is recommended to follow the output of the study to be included in the activities of the SDRRM-CNHS and all other subjects where integration can be done. Proper and multimodal dissemination of the information is recommended, too.

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