

Awareness of Vulnerability of Communities on Natural Disaster & Psychosocial Services of the Local Government Units in the Province of Albay, Philippines

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Abstract

This study investigated the awareness of respondents on the vulnerability of the communities on natural disasters in the province of Albay, the experiences of the community, means of public information, professional experts, and psychosocial services offered by different Local Government Units (LGUs). The study used nonprobability sampling to identify the person in authority in the provincial level. Data from the initial interview were used to pinpoint the participants from the Municipal Social Welfare and Development (MSWD) office, Rural Health Unit (RHU), and Office of the Mayor of the different LGUs for the Focus Group Discussion (FGD). Out of the FGD, communities and families were identified for validation of outcomes. Recall interview was utilized to gather information rooted from phenomenological experience on natural disasters, specifically Typhoon Reming (Typhoon Durian) and Mayon Volcano eruptions. Respondents came from the most affected communities in Ligao, Legazpi, Tabaco, Daraga, Camalig, Guinobatan, Polangui, and Sto. Domingo. The study revealed that some of those affected by the disaster experienced signs of post-traumatic stress disorder (PTSD). Data showed the need for more experts in post-disaster recovery and mental health to make intervention activities, like psychological first aid and debriefing. The study concluded that communities surrounding Mayon Volcano and areas located in the east coast of the province are highly vulnerable to natural disasters, specifically eruption, and storm surge. There is also a shortage of professionals in the LGUs who are engaged in psychosocial concerns. Opening permanent positions in the LGUs, retraining and upgrading of practicing professionals, strong linkages with academic institutions; other government agencies—such as the Department of Health (DOH), Department of Social Welfare and Development (DSWD), and Department of Education (DepEd)—and NGOs; and opening and promoting degree programs nursing, psychology, social work, human services, and guidance and counselling are recommended to supplement the need for professional experts.

Keywords: *Disaster Risk Management, Mental Health, Calamities, Typhoon Reming (Typhoon Durian), Mayon Volcano, Positive Psychology, Post-Traumatic Stress Disorder (PTSD)*

Introduction

Between 1980 and 2011, disasters caused more than 2.5 million deaths and \$3.5 trillion in economic damage and loss across the world (Asia Pacific Disaster Report, 2012). Resilience has emerged to be a major theoretical and primary theme in research topics globally and was thought to be the end product of successful and effective coping mechanisms when people are faced with critical and life challenging adversities. It is a commonly used term related to “psychological resilience,” “emotional resilience,” or “hardiness.”

Psychological resilience has been associated with positive emotion, whose role is to help resilient people to successfully cope with whatever inevitable events they may encounter. It is also aimed at focusing on the strengths of individuals, families, groups, organizations or institutions, communities, and the society to survive a stressful event.

The American Psychological Association defines “resilience” as the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress—such as family and relationship problems, serious health problems, or workplace

and financial stressors (American Psychological Association, 2001). Resilience is “bouncing back” from difficult experiences. Being resilient does not mean that a person does not experience difficulty or stress. Likewise, emotional pain and sadness are common in individuals who have suffered major adversity or trauma in their lives. In fact, the road to resilience is likely to involve considerable emotional distress. Resilience is not a trait that people either have or do not have. The National Institute of Mental Health reports that resilience involves behaviors, thoughts, and actions that can be learned and developed in anyone (UNICEF, 2013).

Young people and children around the globe are faced with adverse environments and conditions like war, displacements, and uncertainties in life including terminal illness and natural and man-made disasters. These young people have to deal with loss and grieving caused by the death of their parents and loved ones. Furthermore, children are also affected by the lack of education due to poverty while others grow up in an environment where they experience physical or emotional neglect and even abuse. Some witness and experience domestic violence while others must cope with broken families or parents who suffer from psychopathology or drug abuse. Not surprisingly, some children do not recover well from these adversities, yet others do. It is along this line that the researcher wants to contribute to building resilience.

The Psychological Association of the Philippines’s theme during the 2013 annual convention (American Psychological Association, 2013) on “Building Hope and Resilience” in all facets of applied psychology is a response to the pressing needs of our society to address the various forms of psychological problems, distresses, and anxieties caused by the present complexities and challenges of life.

The national government has considered preventive and safety measures as it is continuously being bombarded by numerous crises and disasters brought about by being part of the typhoon belt and the Pacific Ring of Fire. Bicol is known as one of the disaster-prone regions in the Philippines. Albay, one of the region’s provinces, ranked first as the most disaster-prone province for having constantly experienced natural disasters like volcanic eruptions, landslides, floods, and typhoons like Milenyo (Typhoon Xangsane) and Reming (Typhoon Durian) in 2006, which were recorded to be some of the most

devastating. The extent of damage and losses upon the lives and properties of many has caused much trauma, depression, agony, and anxiety to those who were much affected and displaced due to the loss of their homes, families, and livelihood. Many lessons have been learned from the experiences of loss and grief, which also contributed to the increase in poverty and crime rate in the province.

With the enactment of RA 10121 or “An Act Strengthening the Philippine Disaster Risk Reduction and Management System, Providing for the National Disaster Risk Reduction and Management and Institutionalizing the National Disaster Risk Reduction and Management Plan, Appropriating Funds Therefor and for Other Purposes,” the province of Albay—through the National Economic and Development Authority (NEDA) and Albay Public Safety and Emergency Management Office (APSEMO)—had set targets in disaster risk reduction and management in terms of priority, improved early warnings and responses, and strengthened preparedness to create a culture of safety and resilience in the entire province (NEDA, 2011).

According to the International Red Cross and Red Crescent Movement (2001), “For most of the last century, agencies involved in emergency disaster relief assisted affected populations with four elements of basic human needs: food, water, shelter and physical care. It is only during the last two decades that emotional well-being (psychological) became a concern and is considered by some as the fifth element of basic needs. Policy makers and donors must now consider that emotional trauma in the aftermath of conflict and disasters are a major barrier to the sustainability of any recovery investment. The sooner the psychological intervention, the sooner the community becomes self-sufficient and actively participates in its own evolution.” As such, psychological resilience has come to be associated with positive emotion recognized as a significant factor in overcoming adverse life situations.

There is extant literature available on building and fostering resilience disaster and trauma, humanitarian support system, medical considerations, and the problems encountered. However, very little has been done or documented on the psychosocial intervention programs implemented intended to develop resilience in adverse life situations from the various localities (i.e., LGUs) and educational institutions through school counseling programs. By looking into the process of creating and building resilience in the entire

province of Albay, it is imperative that initiatives to conduct research from the academe be taken into consideration. This goal can be achieved by building the skills and support within families, schools, and communities before children are faced with adversity. If this will not be done, an increase in the number of Albayanos with depression and anxiety will be presumably prevalent.

The province of Albay, being given due recognition as the best performing unit for the provincial level by the Galing Pook Award in 2008 and the Gawad Kalasag in 2009 (APSEMO, 2008), has already accomplished much in modeling the practice of giving top priority to disaster risk reduction and management. With 502 barangays in 15 municipalities and three cities benefiting from the program on disaster risk reduction, it is of great importance to look into and consider the psychosocial intervention programs being practiced by the LGUs.

Thus, this research looked into the awareness of respondents on the vulnerability of the communities on natural disasters in the province of Albay and explored the phenomenological experiences of the community on natural disasters and their effect on mental health. It also aimed to determine the readiness of the local governments, and their services being offered to the community.

This study was anchored on the model for disaster resilient community implemented by Bicol University on Technology-Based Farm Model with the assistance of the Techno Gabay Program of the Philippine Council for Agriculture, Aquatic and Natural Resources Development (PCAARRD). This model addresses rehabilitation after a calamity and the basis for selecting the model areas in the varying agro-ecological zones.

According to Pavilando (perscom, 2011), the choice of communities to host the various models for disaster resiliency is based on their vulnerability to hazards as determined by their location, natural features, and landscape. The ecosystem approach is also applied as a factor for selection. Upland, lowland, and coastal communities are considered most vulnerable to disasters specifically to landslide, flashflood, and storm surge. The replication of the models considers the physically challenged or environmentally critical areas.

This study aimed to look into not only the vulnerability of the LGUs for disasters or measure

their preparedness, but to examine their interventions to promote the psychological well-being of survivors of disasters and other traumatic incidents. It would like to promote how to build resilience through psychosocial management. As such, this paradigm was considered in the realization of the objectives of this research.

Materials and Methods

A total of 113 respondents were selected in the municipalities of Guinobatan, Malilipot, Sto. Domingo, Camalig, and Bacacay, as well as in the cities of Tabaco, Ligao, and Legazpi. The data were validated through cross analysis of the findings from different methodologies, such as interview, survey, and FGD.

Nonprobability sampling was used in the first line of data gathering. The researcher first identified the personnel in the province with authority, specifically the director of APSEMO for initial information and identification of the highly vulnerable communities in Albay province. From the communities mentioned, the researcher conducted an FGD with representatives from the city or municipal social welfare and development offices and the RHUs, including physicians, nurses, and social workers.

Respondent-Driven Sampling was used through referrals from the barangay officials. They were asked to recommend individuals or families where signs of depression were observed. Recall interview was used in the data gathering process on the members of the family to discover their personal observation and experience related to natural disaster and psychosocial services offered by the local government. Total enumeration was used on the respondents from the city or municipal social welfare and development (C/MSWD) office.

Results and Discussion

The Vulnerability and Experiences of the Communities on Natural Disaster

There are certain geographical areas where large populations are consistently exposed to large-scale traumatic events, like natural disasters (Brunello et al., 2001). The province of Albay is located on the eastern seaboard of the country and this location contributes to the level of vulnerability of the community on

typhoons and tsunamis. The province is also the most affected area every time Mayon Volcano erupts.

The Philippine Red Cross and APSEMO proclaimed that the danger area during eruptions extend up to eight kilometers away from the crater. In the past years, the hazard map released by the provincial government labelled the towns of Guinobatan, Malilipot, Sto. Domingo, Camalig, and Bacacay, and the cities of Ligao, Legazpi, and Tabacao as high risk during volcanic explosions. These LGUs are located at the surrounding area of Mayon Volcano. The volcano has erupted around 40 times over the last 400 years, with the last explosive eruption occurring in May 2013 that killed four tourists and their local guide. Mayon Volcano's eruptions have caused thousands to evacuate the Albay area (Pimentel, 2014). The volcano is known not only because of its perfect cone image, but also of its frequent eruptions.

However, there are cases when some communities are highly affected while others are not due to geographic location and wind direction. Geographic location and wind direction also contribute to the degree of damage in the community. If the eruption happens during "habagat" or northeast monsoon season, Tabaco City and the town of Malilipot will be most likely affected. However, if it happens during "amihan" or southwest monsoon, Legazpi City and the municipalities of Daraga, Camalig, and Guinobatan will be most likely affected by ashfall.

Reports also showed that heavy rainfall in the northern region of the province resulted in flashfloods in the municipality of Polangui, specifically in the town proper. The APSEMO has identified areas that are highly vulnerable to typhoon, tsunami, flashflood, and volcanic debris. These were taken from the data on the degree of damage after Reming (Typhoon Durian) in 2006, the volcanic eruption in 1993, and the flashflood in 2010. The three cities in the province (Tabaco, Legazpi, and Ligao) and the municipalities of Bacacay, Sto. Domingo, Daraga, Camalig, Guinobatan, and Polangui were those in the list.

The evaluation results and reports of the APSEMO were submitted to the province and cascaded to the LGUs. The study shows that most of the mayors were aware that their constituencies are in areas highly vulnerable to natural disasters. They learned about this through the forums and seminars organized by the provincial government of Albay. The data were validated through interviews, but consistency was only achieved in some parts of the province.

A respondent from the upland area who happened to be a barangay official said that, "*Aram mi na nasa high-risk, high-vulnerable an lugar mi ta tig inform kami kan APSEMO and the governor through forums and seminars*" (We know that we are in a high-risk and high-vulnerable area because we were informed by APSEMO and the governor through forums and seminars).

On the other hand, other residents were not aware that their community is located in an area with a high risk and vulnerability to natural disasters. These are either tsunami or flashflood as most of them are communities located near a creek or river. This shows that information was not properly spread to all communities in the province, specifically families in highly vulnerable locations. A family man from lowland area said:

"Medyo harayo naman kami sa salog, pero bigla su baha. Makusugon. Grabeng tubig. First time ito mangyari digdi sa lugar mi (We are a bit far from the river, but the flood happened very fast. It was very strong. There was so much water. It's the first time that happened in our place)."

This was supported by the interview with a mother of two kids living near the river who said that, "*Normal man na tigbabagyo kita. Para so tubig sain daw ito naghali. Grabe kakusog. Gari na dagat (It is normal that we have typhoons, but the water seemed to have come from nowhere. It was very strong like the water of the sea)."*

The finding shows that the LGUs and the provincial government need to be aggressive in increasing public awareness. Every member of the community—from the town proper to the families living in the farthest area—should be aware, informed, and educated of the possible dangers of different natural disasters that they might experience. The literature revealed the effects of natural disasters in Japan, specifically a magnitude 9.0 earthquake and a tsunami in 2011, which reached 10.06 meters high. Officials confirmed that almost 18,000 individuals were listed as injured, missing, and dead (Rafferty & Pletcher, 2011).

Services and Readiness of Local Government on the Effects of Disaster on Mental Health

The local governments and communities observed that there is no psychological test, specifically a

resiliency assessment tool and other valid and reliable psychological instruments to assess the psychological status and condition of the survivors after a disaster. This was revealed in the interviews with different group of respondents.

The FGD participant from the LGU said, “*Dai man kaming psychological test to assess the survivor’s mental and emotional status (“We do not have a psychological test to assess the survivor’s mental and emotional status).”*”

The result was validated through the FGD with a DOH/RHU representative who said that, “*Tig rerefer mi pag igwa kami na clients na kaipuhan ma assess an mental health condition. Tig rerefer mi sa Bicol Regional Teaching and Training Hospital and Aquinas University Hospital (We refer our clients who need to have their mental health condition assessed to the Bicol Regional Teaching and Training Hospital and Aquinas University Hospital).”*”

Extant literature shows the psychological effects of disaster. Primary PTSD may be diagnosed in an individual who has experienced and responded with intense fear, helplessness, or horror like the unintentional traumas caused by natural disasters (Zimering & Gulliver, 2003). It is most commonly observed among the survivors after disasters (Norris et al., 2002; Galea et al., 2005; & Roberts et al., 2010). The highest prevalence of PTSD was found among survivors and first responders and is commonly observed a month after exposure (Sungur & Kaya, 2001).

The absence of a psychological test did not prevent the health personnel and social workers of the LGUs in the province from providing services to the community. However, the local governments admitted that mental health services are not their first priority and that their main concerns are the basic needs of the survivors. Respondents from the group of social workers said:

Tig inot pano kan opisina mi so mga basic needs siring kan pagkaun, higdaan, tubig asin mga bado kan pamilya lalo na so nasa evacuation centers. May mga NGO and volunteer groups na nag tao ki debriefing sessions, games, and art activities. Bata bulan so brownout digdi pagka bagyo kan Reming. (The office prioritized the basic needs like

food, beddings, water, and clothing of the families, especially those in the evacuation centers. There were NGOs and volunteer groups that gave debriefing sessions, games, and art activities. The power interruption took months to be restored after Reming.)

They also added that, “*Pano an immediate need kan community so pang uroaldaw na pangngaipo lalo na so relief goods (“Because the immediate need of the community was their everyday basic needs, especially relief goods).”*”

The communities observed that there were no organized structures and systems utilized in the process of availing psychosocial services in the local government. A relative of one survivor said:

“Dai mi aram an proseso. An ginibo mi, pina isi mi so taga DSWD kan nag duman sa evacuation center na so tiya ko iba an kondisyon pagkatapus kan bagyo. Nagadan pano so mga aki nya saka so agum nya (We do not know how to go about it. What we did was inform DSWD, when they went to the evacuation center, that my aunt’s condition was different after the typhoon. It’s because her husband and children died).”

The same sentiment was revealed in the interview with another survivor who said, “*Da sistema ta hulay kami intindihon. Ra man na specialistang doctor na nag adun samon para kiton tita ko (“There was no system because it took long before we were attended to. There was no medical specialist that went to us to check on my aunt).”*”

The result shows that there is a need to have a structured flow of procedure that will serve as a guide to the members of the community on what to do if the need arises. The number of survivors observed with manifestations of emotional and mental disorders should be given important attention by the government, especially the LGU, since they have responsibilities to address the needs of the communities in their constituencies.

Other studies discovered that exposure to a natural disaster in the past increases the likelihood of acute illnesses such as diarrhea, fever, and acute respiratory illness in children under five years old by 9–18%. In addition, exposure to disasters in the past years reduces growth outcomes such as height and

weight and has significant economic damage and can cause death (Datar et al., 2012). In 2009, 335 natural disasters were reported worldwide, killing over 10,000 people and causing damage worth over \$41 billion (Vos et al., 2010). Disasters have immediate effects on morbidity, as measured by fever and diarrhea. Failure to treat these illnesses effectively and promptly can lead to serious consequences (UNICEF/WHO, 2009). Individuals who feel hopeless, unable to cope with stress, or are socially isolated are at considerable risk of developing cardiovascular disease (Rozanski et al., 2005).

Public Information System, Psychosocial Services, Trained Health Care Providers, and Psychosocial Intervention Activities

Public Information System. Increasing public awareness on disaster preparedness is one of the mandates of LGUs. In the province of Albay, radio is the most utilized channel to inform the public, particularly in giving updates about typhoon status and direction, status of the province, and volcanic and tsunami alerts. Radio stations air interviews with public officials and authorities from different government agencies, such as Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Philippine Institute of Volcanology and Seismology (PHILVOCS) and APSEMO and present the possible effects and damage of the reported natural calamity.

A key informant from the office of the mayor of Bacacay said, “*An ibang estasyon kan radyo minadigdi para personal na ma-interview si mayor. Pero ninsan, minapud sa cellphone ni mayor*” (“Some reporters of radio stations come here to personally conduct an interview with the mayor. But, sometimes, they call the mayor through the cellphone.”)

The data were validated and confirmed by the community members’ responses during the interview. They said:

“*Nagdadangog kami sa radyo, lalo na kung may bagyo* (We listen to the radio, especially if there is a typhoon).”

“*Nadadangog mi sa radyo na tig e interview an mga mayors digdi sa Albay lalo na an mayor kan Legazpi, si Mayor Rosal* (We heard over the radio that the mayors in Albay are being interviewed, like Mayor Rosal of Legazpi).”

“*An mga field reporters ninda pigririport an status kan mga identified na pirmi pigbabaha na lugar sa provincia. Minsan ngani pati so mga kataraning tang provincia arog kan Sorsogon, Catanduanes, and Camarines Sur* (The field reporters report the status of the identified areas in the province that are usually flooded. Sometimes even those in nearby provinces like Sorsogon, Catanduanes, and Camarines Sur are reported).”

Radio is embedded in most cellular phones of today. Almost every household has a transistor radio or a cellular phone to monitor the weather forecast and updates. The provincial government and the LGU officials consider this medium as the best instrument for public information. It increases public awareness, knowledge, and understanding of the natural phenomenon, as well as its status, direction, and possible damage.

Facebook can be accessed through computers and mobile phones. This accessibility to the internet, particularly Facebook, contribute to the consciousness of the community. However, the limitation of this technology is the possible technical malfunction of the service provider caused by the devastation of the natural disaster. In many cases, after the typhoon, the community has no cellphone signal, internet connection, and electric power.

City and municipal LGUs also utilize their websites to give updates and communicate with their counterparts at the barangay level. However, some of their constituents prefer Facebook because it is easier to access and directly connected to their personal account.

A survivor from Bacacay said, “*Haloy pa maghanap kan website ninda. Mas madali sa FB kasi pag open mo ng FB account mo, minaluwas naman mga post ninda* (It takes a while to access their website. It is easier to use FB because once you open your account, you can already see their posts).”

This was validated using a cross section analysis where it was discovered that local radio stations, Facebook, and LGU websites ranked as the top three information tools in increasing public awareness. Other modes of informing the public were posters, kits, and newsletters. Before the devastation of Reming (Typhoon Durian), there was a limited number of local television stations in the province. Most of the communities tuned into national TV networks. For

that reason, LGU officials seldom use local TV to inform the public about the updates and status of their local communities.

Psychosocial Services. The study shows that there were no psychometricians, psychologists, and psychiatrists assigned in different cities and municipalities in the province. Services of these professionals were availed through referrals from the MSWD office or RHU heads. A total of 40 registered social workers are working as regular employees in the different cities and municipalities, distributed as follows: Ligao, 6; Daraga, 5; Tabaco, 5; Guinobatan, 4; Bacacay, 3; Legazpi, 2; Sto. Domingo, 2; Camalig, 2; and Polangui, 1. These social workers conduct different psychosocial services on post-disaster recovery.

It was observed that most of the social workers provided basic counseling sessions particularly in the group of women in different evacuation centers in the province. They also conducted individual informal counseling to survivors with manifestation of depression. The community observed that some of the social workers reach out to the evacuees in different evacuation centers.

One resident said, “*Su tiya ko na na-depress maray dahil kan bagyo, pigkahuron personal kan taga-DSWD. Nagkapirang beses ninda pigbisita saka pig kaisturya* (My aunt who had depression because of the typhoon was personally visited by the DSWD a couple of times. They were here several times to talk to her).”

This group of professionals also performed stress debriefing sessions among different age group, from children to senior citizens, regardless of their role in the family. These were done in partnership with religious and nongovernment organizations. They infused other activities, such as group dynamics and art therapy, to reduce stress. Art therapy activities were given to children, and group dynamics to youths and adults.

“*Kadaklan na mga aki, an drawing ninda may image na tubig, baha, uran, asin parus* (The drawings of most of the children showed images of water, flood, rains, and wind).”

“*An ibang drawing, may imahin na su pamilya nagkakarabitan.*” (The other drawings show a family holding on to each other).”

“We have counselling, medico legal services, stress debriefing, and referral

system, *lalo na po dun sa mga critical cases. Nirerefer namin yung iba sa DSWD and PNP. Meron din sa rehabilitation center* (We have counseling, medico legal services, stress debriefing, and referral system, especially for critical cases. We refer some of them to the DSWD and PNP, while others are sent to a rehabilitation center).”

According to the representative from the City of Legazpi, “LGU Legazpi is offering psychosocial services through its City Social Welfare Development Office (CSWDO) and City Health Office (CHO) like counselling, stress debriefing, stress management, youth group dynamics, children art therapy and others.”

Other social services practitioner also said, “*We are offering psychosocial services. First is basic counseling, we also refer abused women and children to DSWD through psychosocial intervention and temporary shelter on a case to case basis.*”

Data show that the LGUs are in need of licensed professionals with skills and expertise in post-disaster recovery strategies. Other countries also experience the same need (Hughes, 1989; Baenziger, 1998). The LGUs may consider opening positions for registered psychometrician, designing benchmarking programs, and establishing linkages with other agencies and private institution since professionals in this field are limited in the province. The most common psychosocial services delivered by healthcare providers across the cities and municipalities in the province were counseling, stress debriefing, stress management, group dynamics, and art therapy.

Trainings of Health Care Professionals. Trainings enhance the competency level of every personnel. They enrich the knowledge, skills, attitude, and professional competence of the workforce (Pecora et al., 2000). They also provide updates on different issues, practices, and strategies particularly on social welfare (Baenziger, 1998).

The study revealed that the present social service providers have basic trainings on handling individuals with issues on domestic violence, abusive parents, natural disaster, loss of homes, loss of loved ones, and relatives with disabilities. However, not all of these professionals have advanced training on the mentioned issues. On the other hand, some have advanced training on child labor, separated parents, and immediate family members involved in crimes.

One key informant said, “*Kulang pano an number of social services personnel sa mga LGU. Lalo na pag may disaster arog kan bagyo or Mayon eruption, an pig-iinot na itaung serbisyo su mga pisakal na pangangaipo kan komunidad, siring ka pagkakan. Bilang lang samo an may mga advance training sa pag handle ki mga cases. Basic training lang ta in case kaipuhan kami, maski sisay samuya pwede maka assess kan immediate concern ninda* (It is because we lack the number of social services personnel in the LGUs. For instance, during disasters like typhoon or Mayon eruption, the services that are given first are the physical needs of the community, like food. There are only a few of us who are trained to handle cases. We have basic training only so that in case there is a need, anyone of us can do an assessment and attend to their immediate concern).”

The group of respondents in the FGD from the office of the mayor said that:

“To be able to deliver effective psychological services we need financial resources, more trainings and workshops, and additional personnel.”

“We practice referral system to other agencies like rehab and other clinics as the need calls for it. In the event we lack the personnel, we refer them (the person) to the concerned authorized practitioner. The procedure is provided by the CSWDO/CHO the lead stakeholder or partner in charge of these matters.”

Table 1 shows that the social workers assigned in different cities and municipalities across the province of Albay undergo basic trainings on abduction, forced marriage, child labor, separated parents, abusive parents, serious illness like cancer, involvement in crimes, loss of home, natural disaster, loss of loved ones and relative with disabilities. However, only a few of these health care providers have advanced training and exposure on cases like child labor, separated parents, abusive parents, involvement in crimes, loss of home, natural disaster, and loss of loved ones. Advanced training for the present health care professionals and hiring more individuals with specialization on health care and mental health are recommended since the findings show a shortage of experts in the health and social services section in the local government. This is an approach to enhance their technical know-how and increase their emotional maturity since they are susceptible to secondary trauma. The literature revealed that the prevalence of PTSD among first responders is high following an involvement in rescue, recovery, and cleaning efforts

one to two years after exposure (Sims & Sims, 1998). Fullerton and colleagues, (2006) discovered that 22.5% of disaster workers were discovered to suffer from PTSD at two weeks and 10–15 months after the 9/11 terrorist attacks in New York City and Washington, DC, respectively.

Psychosocial Intervention Activities and Other Mechanisms for Recovery. Former Albay Gov. Joey Salceda has been recognized as the Champion of Climate Change in the Philippines by the United Nations International Strategy for Disaster Reduction on climate change adaptation, mitigation, and recovery program. To make the program stronger, the provincial government mandates the LGUs to address the safety, security, and the post-disaster effects of natural disaster on stress and depression. The LGUs, through the office of MSWD, designed and implemented activities to provide for the socio-emotional needs of the community, particularly in the evacuation centers. Part of life skills and coping are the awareness and knowledge on first aid, which were sponsored and facilitated by the Department of Interior and Local Government (DILG), Philippine National Police (PNP), Bureau Fire Protection (BFP), and Philippine Red Cross. It was observed that after the massive devastation of typhoons Milenyo (Xangsane) and Reming (Durian), there were individuals who lost hope on how to bring back their properties, home, appliances, vehicles, and livelihood. That was the most common fear of the survivors in the different evacuation sites in the province.

The key informant from the upland area of Legazpi City near the creek of Mayon Volcano said, “*Wara na kami istaran. Sayang su mga gamit mi. Haluyon ming pig damotdamotan* (We do not have a house anymore. All our things that we have saved for are gone).”

A survivor living in an agricultural area in Polangui shared the same sentiments and said, “*Sayang kan kabasan mi. Ngunyan salog na. Dai na ma uma* (Our farm is gone. It became part of the river already. We cannot grow rice in it anymore).”

Another survivor from Guinoban located in the Mayon unit said, “*Bata nag tipon ako pang abroad ko. Ngunyan natahuban sana so harung na pinagibo ko* (I saved money while working abroad. Now, the house I built got entirely covered).”

A respondent from lowland community said that, “*Naubos sa anud so mga urig ko. Na abot kan baha*

Table 1. Number of Trained of Social Workers on Different Type of Trauma

Type of Trauma	Basic Training		Advanced Training	
	f	%	f	%
Domestic Violence	40	100	15	38
Trauma caused by:				
Abduction	21	53	-	-
Force marriage	21	53	-	-
Child labor	28	70	7	18
Separated parents	36	90	5	13
Abusive parents	40	100	11	28
Serious illness/cancer	24	60	-	-
Involvement in crimes	31	78	4	10
Loss of home	40	100	5	13
Natural Disaster	40	100	5	13
Loss of love ones	40	100	5	13
Relatives with disabilities	40	100	-	-

so urigan ko (All my pigs were taken by the flood. The flood reached the piggery).”

This observation was the basis for the LGU psychosocial services providers in designing and implementing motivational activities. They also observed that life in the center was difficult, uncomfortable, no sense of privacy, less productive, and not much secured compared to their usual life in the village. The congestion of the families and the time in the center creates conflicts between individuals. The survivors said:

“May mga sitwasyon na nag-aaway-away na dito sa evacuation center (There are times when people in the evacuation center fight among each other).”

“Masikip, mainit, labas-pasok ang mga tao—kaya minsan mainitiin na ang ulo ng mga nandidito (It’s cramped, hot, and many people go in and out—these are why some people become hotheaded).”

On the other hand, some survivors stayed with their relatives in neighboring provinces and cities to make a living.

The governor initiated some innovations in response to the needs of the entire province. The creation of the Climate Change Academy contributed in increasing awareness and knowledge building. The provincial government, in partnership with the LGUs, organized conferences, conducted seminar-

workshops, and published printed materials to educate the Albayanos on disaster, social responsibility, and climate change. One important accomplishment was the inclusion of disaster preparedness in all the subjects of the DepEd curriculum. Experiences of the community were recorded and transformed into modules and learning materials.

On the other hand, the service providers on mental health of the different LGUs organized seminar-workshop on life skills, climate change adaptation, social awareness, stress management, motivation activities, and conflict resolution. They have, however, raised concerns on financial resources, lack of facilities, and updating of their professional skills and technical competencies.

Conclusion and Recommendations

The study concludes that the communities located around the circumference of Mayon Volcano, specifically those beside the rivers directly connected to the volcano, are highly vulnerable during eruptions and flooding. The communities in the east coast are in the same level of vulnerability for tropical storms, typhoons, and tsunamis. The LGUs are in need of more trained mental health professionals to address the concerns of the local communities, specifically on mental health-related issues. Lastly, the LGUs across the province are not fully ready to face and address the posttraumatic effects of natural disasters since their priorities after the disaster is to attend to the basic needs of the individuals.

The study recommends a strict implementation of preemptive evacuation or forced evacuation of families located in high-risk areas as identified by the

local community officials to avoid direct exposure to disaster and PTSD. Advanced training of the mental health care providers, such as physicians, nurses, psychologists, psychometricians, guidance counselors, and social workers is recommended to help those who experience secondary trauma and to enhance their technical skills in handling survivors. Religious people (pastors, priests, and nuns) are also recommended to undergo the same training, since they administer spiritual counseling. Strong linkages with academic institutions in the region; other government agencies such as the DOH, DSWD, and DepEd; and NGOs are also recommended. More Higher Education Institution (HEIs) and State Universities and Colleges (SUCs) can also offer programs that will produce experts in handling psychosocial and mental health issues like in the fields of nursing, psychology, social work, human services, and guidance and counseling. The HEIs, SUCs, and other tertiary schools should design their curriculum aimed to create graduates with exceptional competencies in community relations, social responsibility, and a high level of emotional intelligence for the service of the community. Further research on the effects of disaster on parents' ambition for education and a child's learning process are also recommended.

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References

- American Psychological Association. (2001). *The road to resilience*. <http://www.apa.org/helpcenter/road-resilience.aspx>
- American Psychological Association. (2013). 4th Congress of the ASEAN Regional Union of Psychological Societies (ARUPS) and 50th Annual Convention of the Psychological Association of the Philippines (PAP). <https://www.apa.org/international/pi/2013/06/asean>

- Baenziger, B. (1998). *An evaluation of training classes provided to country child welfare workers*. [Master's Thesis, San Diego State University]. <http://www.users.cts.com/sdlb/bbziger/webthes1.html>
- Brunello, N., Davidson J. R., Deahl M., Kessler R. C., Mendlewicz J., Racagni G., Shalev A. Y., & Zohar J. (2001). Posttraumatic stress disorder: Diagnosis and epidemiology, comorbidity and social consequences, biology, and treatment. *Neuropsychobiology*, 43, 150–162.
- Datar, A., Liu, J., & Linnemayr, S. (2012). The impact of natural disasters on child health and investments in Rural India. *Chad Stecher Soc Sci Med*. 2013, 76(1), 83–91.
- Hughes, R. (1989). *Competent staff, competency based in-service training for child welfare*, Washington, DC. Child Welfare League of America. The Institute for Human Services.
- NATO (2008). *Psychological care for people affected by disasters and major incidents. A model for designing, delivering & managing psychosocial services for people involved in major incidents, conflict, disasters and terrorism*.
http://www.cnss-summitbucharest.eu/index_en.html
- NEDA (2011). Local adaptation for livelihood resilience in Albay, Philippines. *Article in Environmental Hazards*, 10(2), 139–153. www.researchgate.net/publication/233018986_Local_adaptation_for_livelihood_resilience_in_Albay.
- Norris, F., Tracy, M., & Galea, S. (2009). Looking for resilience: Understanding the longitudinal trajectories of responses to stress. *Social Science & Medicine*, 68, 2190–2198.
- Pavilando, L. (2011) Extension Service Center, Bicol University
- Pecora, P., Whittaker, J. Maluccio, A., Barth, R., & Plotrick, R. (2000). *The child welfare challenge: Policy, practice & research*. New York.
- Pimentel, L., (2014, September 19). *Eruptions cause thousands to evacuate*. Liberty Voice. <https://guardianlv.com/2014/09/mayon-volcano-eruptions-cause-thousands-to-evacuate/>
- Rafferty, J., & Pletcher, K. (2011). *Japan earthquake and tsunami*. Encyclopedia Britannica, Inc. <https://www.britannica.com/event/Japan-earthquake-and-tsunami-of-2011>
- Roberts, A., Gilman, S., Breslau, J., Breslau, N., & Koenen, K. (2010). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic

stress disorder in the United States. *Psychological Medicine* 2011, 41(1), 71–83.

- Rozanski A, Blumenthal J. A., Davidson K. W., Saab P.G., Kubzanski L. (2005). The epidemiology, pathophysiology, and management of psychosocial risk factors in cardiac practice. The emerging field of behavioral cardiology. *J Am Coll Cardiol.* 45, 637–651.
- Sims A., & Sims D. (1998). The phenomenology of post-traumatic stress disorder. A symptomatic study of 70 victims of psychological trauma. *Psychopathology*, 31, 96–112.
- Sungur M., & Kaya B. (2001). The onset and longitudinal course of a man-made post-traumatic morbidity: survivors of the Sivas disaster. *International Journal of Psychiatry in Clinical Practice*, 5, 195–202.
- UNICEF & WHO (2009). Diarrhea: Why Children are Still Dying and What Can Be Done. United Nations Children's Fund: New York. http://whqlibdoc.who.int/publications/2009/9789241598415_eng.pdf
- UNICEF (2013). Syria's Children: A lost generation? Crises report March 2011–March 2013. UNICEF: New York. http://www.unicef.org/files/Syria_2yr_Report.pdf
- Vos F., Rodriguez J., Below R., & Guha-Sapir D. (2009). *Annual disaster statistical review: The numbers and trends*. Centre for Research on the Epidemiology of Disasters. http://www.cred.be/sites/default/files/ADSR_2009.pdf
- Zimering, R., & Gulliver, S. (2003). Secondary traumatization in mental health care providers. *Psychiatric Time*, 20. <https://www.psychiatrictimes.com/ptsd/secondary-traumatization-mental-health-care-providers>