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Filipinos in Japan: Narratives of Experience from the March 11, 2011 Great East Japan Earthquake and Tsunami

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Filipinos who have settled in Japan as residents were interviewed between June to August 2011. The purpose of these interviews was to gather first-hand accounts of survivors about the March 11, 2011, magnitude 9 earthquake that triggered one of the worst tsunami events in Japan's history. It is important to document what survivors have learned from these events. Considering how infrequently tsunami events occur in the Philippines, lessons from these descriptive narratives could become a valuable information resource for the Philippines population that might experience tsunami-generating earthquakes in the future, especially because first-hand accounts by Filipinos living abroad would be easy for those living in the Philippines to relate to. This documentation has focused on how Filipinos in Japan were affected, what actions they took during the event, their prior knowledge of earthquake and tsunami preparedness, and how they survived and recovered. Important actions highlighting what to do include the following five: (i) attending and taking part in community awareness activities, (ii) preparing emergency bags holding useful items such as flashlights, food and water, and protection against the cold, (iii) using mobile phones, (iv) paying attention to warnings, and (v) relying on multiple information sources such as television, radio, community sirens or public address systems, and local fire units. Although simple, these actions could save lives in critical times. The lessons they teach show what to do and what NOT to do during earthquakes and tsunami warnings. What NOT to do includes the following:

- (1) Do NOT panic.
- (2) Do NOT return home to pick anyone or anything up, especially if you live near the coast.
- (3) Do NOT drive or use a car when evacuating.

Keywords: narratives, disaster education, evacuation, warning

1. Introduction

A M9.0 earthquake hitting the eastern Japan coast at 14:46 (JST = UT + 9 hrs) on March 11, 2011, lasted 2–3 minutes and was followed within a minimum 15–20 minutes [1] to a maximum 30–40 minutes [2] by tsunami waves 2.5 meters in Rifu, Miyagi Prefecture, to 40.5 meters high in Miyako, Iwate Prefecture [1]. Waves inundated coastal communities in Iwate, Miyagi, and Fukushima Prefectures (**Fig. 1**) and flooding villages up to 10 kilometers inland [3] in some areas. The dead and missing were estimated to number 18,500 [2].

Several papers have detailed technical aspects of the March 11, 2011, event – rupture mechanisms, tsunami wave propagation, travel time, heights and inundation [1, 4, 5]. Others have described societal dimensions, emergency management and response and economic impact [6, 7], evacuation behavior [8, 9] and information gathering behavior [10]. Insights from survivors are also well documented [2]. Most papers have focused, however, on the experiences of Japanese citizens, except when discussing information gathering and evacuation behavior by non-Japanese, in Fukushima, where most non-Japanese opted to evacuate to other parts of Japan or left the country entirely [9–11].

Our interest here differs because we focus on descriptive narratives concerning experiences of Filipinos living in Japan during the event. These Filipinos settled and became residents of Japan for years prior to 2011. The importance of the Filipino perspective lies in its use applied to earthquake and tsunami awareness and preparedness in the Philippines.

At least 41 significant historical tsunamis were identified in the Philippines between 1589 and 2012 [12]. Because tsunamis are infrequent, few residents have any memory of them. Because of this history, however, programs on tsunami monitoring, warning, awareness and preparedness were established even before the Decem-



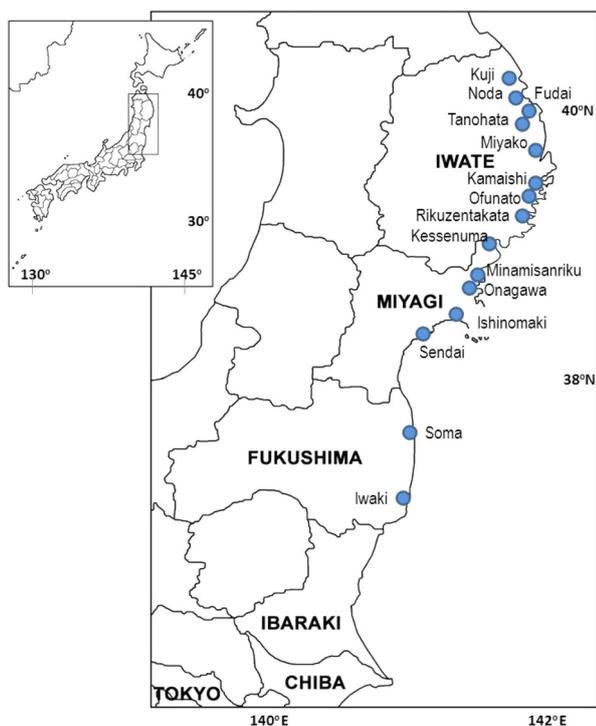


Fig. 1. Prefectures north to south covered in this work – Iwate, Miyagi and Fukushima – and cities and towns whose residents were interviewed.

ber 26, 2004 Banda Aceh event – stories and documented descriptions of events such as the 1976 Moro Gulf earthquake and 1994 Mindoro earthquake [12] thus being relied on for information, education and communication [13]. Lessons from the December 26 2004 Banda Aceh event have led to intensification in the Philippines’ of programs covering the enhancement of national monitoring and warning systems and information used in education and communication such as the development of materials, capacity building simulation, and drills and exercises in national and community levels [13]. Additional lessons from the 2010 Chile event have definitely contributed further to the enhancement of earthquake and tsunami program in the Philippines. For the March 2011 Japan event, the experiences seen from the perspectives of Filipinos in Japan provide further informative lessons potentially useful for managing local Philippine earthquake and tsunami information and education at the community level. While we recognize the need for monitoring and warning systems at the national level, we hold that all levels from regions and provinces down to towns and communities must also have complementary programs if tsunami awareness and preparedness are to be spread successfully.

The narrative inquiry is the study of human experience involving the retelling of stories [14] using interviews as a data collection tool [15]. Narratives are stories people tell about their lives [16] – in this case, an earthquake-related event – events experienced by the narrators. Here we see the importance of the “point of view” that distinguishes narratives from stories [17]. These narratives are

interesting because they are situated within a broader cultural and social context and thus reveal social structures and processes. A particular strength of the narrative approach is that it enables us to analyze how human beings typically understand and represent their own lives.

2. Methods of Data Collection and Analysis

In the descriptive narrative approach taken by this work [18], respondents were requested to recount the event and narrate it just as it happened. Initial interviews were conducted between June and August 2011, about 3 months after the event. Some respondents were followed up more than a year after, in June 2012. To arrive at a narrative form, all video-recorded interviews were transcribed and analyzed qualitatively based on selected sections divided into common topics. This thematic analysis emphasized what was said [19], from which portions were selected for presentation and discussion.

This paper, with its emphasis on respondents and survivors, is qualitative in nature. Its significance lies in the story-telling – the sharing of a wealth of narratives – full of the descriptions and insights of people having first-hand experience and whose narratives other Filipinos can relate to.

3. Brief Profile of Respondents

Filipinos interviewed numbered 52–22 from Iwate, 26 from Miyagi and 4 from Fukushima. Two were men and 50 were women ranging in age from 20 to 56. Only the youngest – a half Japanese-Filipino – was born in Japan. The others have been living in Japan from 2 to 36 years. Interviews were conducted at respondents’ homes (**Fig. 2**). **Table 1** details information – age, years in Japan – of the 21 interviews respondents whose narratives we quoted and used extensively in this paper.

4. Interviews

The following excerpts from narratives focus on prior knowledge about earthquake and tsunami preparedness, location and action taken during and after the 2011 earthquake, warnings received, what witnesses saw as the tsunami struck, evacuation behavior, surviving the tsunami, post-event signs of trauma, and recovery and its aftermath.

4.1. Prior Knowledge About Earthquake and Tsunami Preparedness

Some respondents recalled knowledge acquired long before the event through varying degrees of participation in community activities related to earthquake preparedness. Many are familiar with earthquake and tsunami preparedness from flyers, maps, signage, or tsunami warnings but have not necessarily taken part in community earthquake or tsunami preparedness activities. Several at-



Fig. 2. Interview in Rikuzen Takata, June 2011.

Table 1. Information on the 21 respondents whose narratives appear here in part.

Survivors	Age	No. of years in Japan	Location
LN	26	no data	Noda, Iwate
GK	39	18	Tanohata, Iwate
MK	no data	no data	Kamaishi, Iwate
RK	43	no data	Ofunato, Iwate
MS	47	16	Rikuzen Takata, Iwate
EY	45	15	Rikuzen Takata, Iwate
HK	42	10	Rikuzen Takata, Iwate
WS	34	11	Rikuzen Takata, Iwate
MG	32	12	Kesenuma, Miyagi
AS	no data	30	Minami Sanriku, Miyagi
JS	41	9	Minami Sanriku, Miyagi
AY	30	9	Onagawa, Miyagi
JI	50	21	Ishinomaki, Miyagi
LK	43	9	Ishinomaki, Miyagi
SS	57	11	Sendai City, Miyagi
MS	59	36	Sendai City, Miyagi
SA	46	22	Shichigahama, Miyagi
HY	41	13	Sendai City, Miyagi
LM	43	19	Soma, Fukushima
CF	43	21	Shinchi, Soma, Fukushima
IS	42	18	Soma, Fukushima

tributed the preparedness knowledge of their children to school activities.

“Here, the signage says where to run to – it’s called takadai – high ground. Signage also has simple maps indicating where you should go in an earthquake or tsunami.” – AS, Minami Sanriku, Miyagi

“In my experience in this town is that they make announcements over loudspeakers directly from the town hall. Whenever there is an earthquake they ask us to evacuate, even if they are not sure if there is going to be a tsunami.” – JI, 50, Ishinomaki, Miyagi

“The flyer tells where people should meet and what to bring. There are no details about tsunamis be-

cause as I have said before, they have not experienced any.” – LM, 43, Soma, Fukushima

“We practice so that when an actual tsunami or earthquake came... we would know what to do. Yes, they teach us where is the safe place as they identified. It’s been mentioned several times... on those maps where they show the locations of high ground... yama, yama, that’s what they call the mountains here.” – MK, Kamaishi, Iwate

“My two kids both are in high school. I picked them up from school... They know what to bring because this is taught in schools. They have biscuits or instant noodle cups in their knapsack – everything in what is called an emergency kit... Are the children more relaxed? Yes, that’s true. They are ready with their jackets and knapsacks. They even have their piggy banks in their bags. Their school IDs, because anywhere you go, this is needed. They know the important things to bring. I was the one who panicked.” – LM, 43, Soma, Fukushima

Prior arrangements within the family in case of an emergency were mentioned by one respondent:

“I would tell my children I will not look for you, you know where to go and I will find you there. So you have prepared yourself to go, and then meet them there.” – CF, 43, Shinchi, Soma, Fukushima

4.2. Action Taken During and After Shaking

A typical weekday afternoon, most of the respondents were either at work or at home when the initial shaking occurred at 14:46 JST. The majority were so surprised by the strong shaking that only a few remembered to duck for cover and wait. Many panicked. Those at work were immediately concerned about their families. Most were sent home by their employers. The immediate instinct of those sent home was to drive by their children’s schools to pick them up or to go home and check on their families in spite of having already heard the tsunami warning and advisory to evacuate.

“You will really panic! People were running with their bags... I wondered why they have bags... I said to my colleagues, ‘I don’t have anything with me, so I will go home first to get some important things...’ they said not to go back because the tsunami was coming. I heard the same thing from my neighbors about not to go back anymore, the tsunami is coming. A neighbour pulled and pushed me in the direction of high ground... it was around 3:15, I think.” – JS, 41, Minami Sanriku, Miyagi

“At work, at 2:46 in the afternoon, I felt, then first heard something like rumbling, I was near the door. I got my bag and hurriedly left. I screamed, we cried... the shaking continued. At the park, I heard the announcement that there was a tsunami. Not from the radio, but from a moving vehicle like a fire

truck that was announcing that a tsunami was coming. I stayed there until around 3:10. . . I drove, praying to the gods to please protect my son . . . If I see my son again, it will be okay if I die after that.” – IS, 42, Soma, Fukushima

“ . . . and it was my first time to experience that kind of strong earthquake, so I ran. . . my son and I hid under the table. . . and the table, which was near a huge cabinet. . . full of plates (china), so I tried to cover my child to protect him.” – LN, 26, Noda, Iwate

4.3. Warnings Received

The Tohoku coast of Japan has had devastating tsunamis in the past, e.g., in 1896, 1933 and 1960 [2], and more than half of respondents acknowledged to have actually heard warnings in various forms. Warnings were from the local public address system – outdoor loudspeakers – from the city hall in Rikuzen Takata and Kamaishi in Iwate and Minami Sanriku and Onagawa in Miyagi known as *bosai musen* [3]. In most cases, this was followed by news on television and radio. Announcements continued until everything became chaotic. Power went out as soon as tsunami waters flooded the land. Sirens were initially heard not once but several times and warnings were immediately broadcast over the public address system and distinctly heard by respondents. Unfortunately, what was repeatedly announced was that the tsunami was estimated as 3 meters high for Iwate and 6 meters for Miyagi [20], but what arrived however was a tsunami more than 10 meters high. People were overwhelmed as they recounted:

“Every house has its small machine for announcing such information. It is connected to the town hall. Now, for example, there is a special announcement, like about an earthquake, which broadcasts the information after the earthquake.” – JS, 41, Minami Sanriku, Miyagi

“ . . . a loudspeaker announced to ‘evacuate now, a tsunami is coming’ . . . ” – GK, 39, Tanohata, Iwate

“There was a siren a, siren first. You could hear it. There was siren, then people were telling me to evacuate because a big tsunami was coming. After just a few minutes, the tsunami arrived. . . ” – MS, 47, Rikuzen Takata, Iwate

“The radio announced while I was driving home, that a 3-meter high tsunami was coming. In my mind, I had to escape to the mountains. I was worried because, in the first place, I do not know how to swim” – EY, 45, Rikuzen Takata, Iwate

“Because I was on my way home, it was very noisy. There was an announcement about the tsunami after the earthquake – it said that the tsunami was 10 meters high and that we should evacuate. After some time, in the end, we heard the person making the announcement crying out ‘Please help me, the tsunami has arrived. . . ’ many people heard this. ‘Help me,

the tsunami is here’ . . . I heard it.” – AY, 30, Onagawa, Miyagi

“But even if there is no power, there’s battery-operated radio. In the news we heard that it is 10 meters high. I said myself, ‘10 meters?’ I guess that is just half as high as my house. That is why I expected it would still be there. When we were able to get home the following day, the house was in bad shape. I think the tsunami was more than 10 meters because the sea wall was destroyed.” – MK, Kamaishi, Iwate

“All the telephone lines were cut, so I heard from passers-by that a tsunami 6 meters high was coming – but it was only hearsay.” – SS, 57, Sendai City, Miyagi

4.4. What Witnesses Saw as the Tsunami Struck

Having barely escaped the rampaging waters as they ran to high ground, many were just in time to witness how the tsunami engulfed the entire town:

“I was outside when a friend told me to evacuate immediately to higher ground because a tsunami was coming, and people from lower areas were running up the slope to higher ground. So I grabbed my bag, my cellphone, and a blanket for my youngest child because she did not have a jacket at the time and it was cold – it was snowing at the time, so it was freezing. When I went up, I saw people were already running for high ground. That was when I finally came to my senses (and realized) that I had to run. It was when we were already in the upper part toward high ground that we saw these really huge waves – we saw people swept away by the waters, waving their arms. . . and then the houses, the people were swept away, the houses were swept away. . . the cars, they still had their headlights on, and the honking. . . the sound, the houses burning. You see people, their arms waving, because they had not thought their places will be affected. You see people waving their arms like this. . . You could see the houses burning. . . cars floating everywhere.” – MS, 47, Rikuzen Takata, Iwate

HK lost her mother-in-law and sister- and brother-in-law and witnessed how her husband was swept away by the tsunami.

“We went to my sister in law’s house. It’s like 15 minutes from our place going to my sister in law’s place. Then in less than 5 minutes after we arrived, when I looked out the window and the tsunami had arrived. So I said, ‘Hayaku nigero, hayaku nigero,’ I secured my children first. My two children, the younger one in my arms, then. . . my husband, he could not run because he did not want to leave my sister in law, my brother in law, okasan and him. The four of them, they were left in the house. Then I ran, I really saw the tsunami. I ran with my two children. So we ran, but my husband could not run, because he

could not leave my mother-in-law. They were already outside the house. . . yes, but you could not escape because the tsunami was moving so fast. So, what we did, we ran, I cried, I expected (my husband) was already dead. If you saw the tsunami, you would not think that a person could live through it. I saw how the house was tossed about like paper. So we ran, we cried and cried as we thought he was already dead. Then after about an hour, my husband – he is a real survivor – he suddenly rose up, emerged from the mud and started shouting Junpei! Haruka! We did not recognize him as he had mud all over, dirt all over except for his eyes, which we recognized. Had he not shouted our son's name, we would not have recognized him. So when he said, 'Haruka, Junpei,' I knew it was my husband. I did not think he'd survive. Up until the very last, he did not let go of his mother. He held on for as long as he could. He held onto his mother's sleeves. He could have been swept away as well, but when they got separated, what he did was hold on tightly to a piece of wood and wait for the water to recede before he let go." – HK, 42, Rikuzen Takata, Iwate

"No, it was still far out there, still approaching, and from the yama. . . what's yama in tagalog? Ah mountain. . . from there you can see, it is really coming in very strong. The man said, 'Aye, this is dangerous, this is big, and so on' . . . and so the more I panicked. Then I saw what was coming towards us. Someone said, 'It's here, it's here' . . . and there were screams and shouts to evacuate, to hurry. . . We hurriedly left, we ran because we saw down below – the people farther down below had already abandoned their cars, but it was too late, the tsunami had arrived. The people could not move with the cars anymore. They were trying to outrun each other. They all ran up the slope. . . and I saw how some people did not make it – they were swept by the tsunami. I thought I would faint. I just looked down below, I could not believe there were no more cars, the houses were on top of each other. . . It was all so swift, it was like the sea sucked everything away and the water was gone again." – RK, 43, Ofunato, Iwate

4.5. Reactions During the Tsunami Warning

Respondents had various reactions upon hearing the issuance of the warning. Some immediately heeded it, some did not. Some heard other people or neighbors say that they didn't believe a tsunami would come. This created confusion for a while. But it was good that many of the respondents still sought to go to high ground in spite of what they heard from others. Many heeded the warning, or probably due the fact that they already saw the tsunami coming, they ran towards safety. As what was also recognized, the motivation for scampering to high ground was actually seeing the tsunami [7].

"Because every time when there is an earthquake, a siren wails. Yeah, sound and then 'Hinanshite ku-

dasai, hinanshite kudasai!' (please evacuate, please evacuate). But actually every time there is an earthquake, nobody's moving. . . yes, because they are used to that, they think that there will be, that nothing will come. . . no tsunami will come. . ." – MS, 59, Sendai City, Miyagi

"Even before March 11, we have experienced tsunami alerts so many time but they never resulted in a tsunami. We evacuated, yet there was no tsunami. So this time, this tsunami, we did not think it will be this huge." – MK, Kamaishi, Iwate

"Yes, you can hear the siren giving out warnings to evacuate. . . you can still feel the earthquake. . . but it has always been like that. There was a time we evacuated because they said there will be a tsunami, but it never arrived. There's the siren, then the megaphone or loudspeaker. . . And there is also a radio warning." – MK, Kamaishi, Iwate

"Yes, there was this loudspeaker repeating, 'Please evacuate, please evacuate, a tsunami is coming.' Unfortunately, some did not heed the warnings. Many went back – forgot the dog, forgot money. Many went back, they went back and that's why they died. And then there were the elderly who had no family at home to look after them when the tsunami struck." – GK, 39, Tanohata, Iwate

"I remember, because these things had happened before (when) there was an earthquake, and an announcement that there would be a tsunami. I asked my husband about the news (about a tsunami) 50 cm high – how high was that? My husband said probably up to the knee. He and my children just stayed in their rooms. It has happened before, many times (the warning would say) – when there is a warning for an incoming tsunami, do not go near the shore." – SA, 46, Shichigahama, Miyagi-gun

"Some people said, no, the water would not rise. It only remains that way. That's what the old people said. Don't worry, the water will not rise. I told myself, it will go up, it was so strong (the earthquake), right?" – AY, 30, Onagawa, Miyagi

". . . because my mother-in-law said an earthquake that strong would not bring a tsunami, and if there is, it will not be THAT strong." – JS, 41, Minami Sanriku, Miyagi

4.6. Surviving the Tsunami

At least two both witnessed the waves as they hit the land and were actually caught or trapped by them but survived. Their narratives describe vividly how they managed to escape.

According to studies, many people took to their cars to evacuate, only to cause traffic jams that aggravated the situation [2]. As seen in news footage, many cars having drivers and passengers trapped inside were swept away by the incoming tsunami. MG, 32, from Kessenuma, Miyagi,

was one of those caught in a similar predicament. Having let to go home by her employer after the earthquake, she took her car but was caught by the tsunami. The following details how she survived:

“For a few minutes, the buildings swayed and shook so we all went outside. We were allowed to go home. I had not really gotten away, but was waiting at the stoplight, which was out and turned out to be not working. That’s why the traffic was so jumbled up. In a few minutes, I looked at the river, where the boats seem to be swaying. I even got out of the car to look. . . In another minute, I did not know what to do anymore. The swaying seemed to be getting stronger. I got back in the car. I looked back again and the water was dark and cars were being tumbled all over. . . I parked between two houses. As I parked, I looked back to see what was going on and cars were being rolled over and over. When I looked over to my side, the house beside me was gone! I felt then that the house that would at least supported my car a little was gone. . . so I realized that whatever could support or shield me from the waters was gone. My car just started floating. I did not feel anything anymore. . . my car just floated, rolling up, down, up, down. I was just in the same spot, as the waters swirled around, my car floating. I heard someone shout from a nearby building, where they shouted that the back window was broken. They told me to get out of the car while the waters seemed calm. . . I gained some courage and got out of the car through the broken window. A lot of stuff was floating around – pieces of roof, wood with nails and all. I stepped onto the roof of the car, slid down to the side, grabbed ahold of the floating wood, and used these to get to the side of the building. From there, they lowered down a vacuum cleaner chord to reach me. It was slippery and difficult to hold onto. The two men on the terrace reached for me as I held onto the chord and grabbed my hands and pulled me up. I used my legs to push myself up on the ledge. It was very cold and I was very wet. They gave me clothes to change into and lent me a blanket.” – MG, 32, Kesennuma, Miyagi

LK, 43, of Ishinomaki, Miyagi, was very concerned about her husband and father-in-law, who was bedridden. As soon as the shaking stopped, she practically dashed home on foot, not thinking about the tsunami. Her vivid description follows:

“From work, I ran and ran along the streets, wanting to go home immediately to my husband and father-in-law. Many people were going in one direction but I was going in the opposite direction, towards the sea. People were going away, going away from the sea. I wondered why. I did not think of a tsunami – it did not even come to mind. The people were panicking, getting out of their cars, climbing. I reached the long bridge (Ishinomaki), telling myself, ‘Oh God, I

hope there is no earthquake!’ because I was afraid the bridge might collapse after another earthquake and I would die if it collapsed. Then I noticed the river – this was a big river connected to the sea – and there was no water in the river, and whatever remained of the water was flowing rapidly towards the sea. Why? I stopped, and then I remembered what I’d heard on television about how when a tsunami is about to arrive, the water disappears like ‘hini-higop ng dagat’ (the sea sucks in the water). . . when I looked at the sea, I saw I was in the middle of the second bridge. I could see at first small, but behind it a very huge wave. It was not dark yet, but when it entered the mouth of the river, it was dark, mixed with mud and debris, and there was this awful stench. It was a good thing that right after the bridge, the stairs to the footbridge were already near. A man ran past me shouting, ‘A tsunami is coming, it’s here!! Tsunami!!’ I started running myself. I saw a manhole with water from the canal spurting out. . . as I ran up the stairs, I could see the water behind me, engulfing the area below. When I reached the footbridge, I saw the tsunami – it was so big, so dark that you could not see the buildings anymore. It was like a whirlpool, the water swirling. Many houses were lost. The electric posts and poles were cut or went down. I screamed, ‘My God, is this the end of the world?’ Water all over. It took so much time, we were up there. We were afraid, the water was still rising. I was so scared it would continue rising. I saw a man who climbed the pole on the side of the footbridge to make sure water does not reach him if it rose higher. I saw another post, so that’s where I went up, held on to it, so that the water did not reach me.” – LK, 43, Ishinomaki, Miyagi

For hours she held onto the post on the footbridge. As she’d feared, LK’s house was swept away by the tsunami and both her husband and father-in-law were killed.

4.7. Personal Lessons Learned From the Tsunami

All were one in saying that the enormity of tsunami was totally unexpected – something they had never experienced before – but many in retrospect had one or two things that they realized or learned from the event, such as they had not prepared for an emergency and that they had not taken it seriously.

“You know what changed in me? Now I have lots of stock like canned goods, easy-to-prepare meals, rice, water. . . I have plenty of stock like noodles.” – IS, 42, Soma, Fukushima

“There is nothing to buy, so I realized that when something like this happens, you need water and food, which are really important. But the following day, there were some who started distributing water. . . we need to always be prepared – especially water – that is really number one. Clothes, even if you do not change for a few days, that is ok. But food and

water, these are important and cellphones, these are important. . . Even if at that time, I had money in my pocket, I was able to put some money in my pocket. But money for the next several days, you have no use for it. Nothing. You will not be able to buy anything – there was nothing to buy! So I said to myself, if disasters happen, you need water and food. . .” – LN, 26, Noda, Iwate

“You really have to keep stock. I found that you have to line up at 6 o’clock in the morning before the distribution booth opens when you don’t have food.” – HY, 41, Sendai City, Miyagi

4.8. Post-Event Signs of Trauma

Months or even more than a year after the March 2011 some respondents still experienced trauma. Following are some of their thoughts:

“Whenever I go to bed since the March 11 earthquake, I don’t sleep in pajamas. . . I wear pants in case I have to run. Our bedroom has a door, so I sleep near the door. Even if it is very cold, I leave my door open. Even now, I sleep near the door.” – HY, 41, Sendai City, Miyagi

When asked how many months before she could finally say that she had recovered from the fear brought on by the earthquake and tsunami, MG had this to say:

“How many months? Even now I am still scared, yeah? To me, I think it’s not – it’s difficult, difficult to forget what happened to me. . . I can’t tell you. Now, I am still scared. Like I don’t want to see the sea. Any time I see it, I don’t want to go near it. I feel like the sea is coming towards me. . .” – MG, 32, Kesenuma, Miyagi

4.9. Recovery and its Aftermath

This work is not only about escape and survival narratives about the actual tsunami, but is also about what Filipinos had to deal with after the disaster. After three months, after the dead have been buried, the sites where houses used to stand have been cleared, signs of recovery have slowly emerged. Families have settled in temporary housing, buildings have been repaired or reconstructed, business establishments and schools have reopened. Some people have gone back to work, some took odd jobs and volunteered for the cleanup. These are indicators that recovery and moving on had started.

WS, Rikuzen Takata, Iwate, went back to work as soon as her company, which is by the sea, started operations again less than a year after the event.

“Our company did not have any casualties during the March 11 tsunami. During the earthquake, the company immediately evacuated employees to high ground. Even before the March 11 earthquake, every month, at least once a month, we practice what to do in case of an earthquake. We have buses lined

up and for at least 1 hour, we practice how to evacuate in case of a tsunami. There is a bus on standby. Go out, get on the bus, go to high ground. There are only 4 companies along the shore, but we do this once a month. Thirty minutes is not too heavy on the schedule. The lives of employees depend on this, so we practice what to do when there is an earthquake. You should not get too affected by trauma. If every day you are nervous and you are very close to the sea, if you let yourself be afraid, if you let this scare you, nothing will happen. You need to have a strong heart. You will get nowhere if you let yourself be scared.” – WS, Rikuzen Takata, Iwate

The story of recovery and rebuilding by CF’s family in Shinchi, Fukushima, is one of the best examples of continuously working again and reestablishing business with the help of the government and the mother company willing to give enough starting funds to keep the business going. They were even able to get all their pre- March 11 employees back to work with them.

“We have to start like zero. . . and, as in zero, you start with nothing. My husband is really good in business. He went back to company headquarters and apologized for the loss of products. But he was inspired to reopen the company, so within one month and a half, natayo ang company (the company was reopened). . . They looked at the map and pointed out the new location of the company – the place is all industrial. My husband was given the chance, they gave him land where he could build his company. . . there was staff – he saved the staff – so he called them. He paid them even if there were still no jobs just to stay with this company. Now we still have the same staff doing the same jobs.” – CF, 43, Shinchi, Soma, Fukushima

Another positive recovery story is what was shared by MG:

“This incident that happened to me – it’s like I was given a second chance at life and I was helped by people, so now what I would like to do is help others. Now I work as a caregiver. Before all of this, being a caregiver would never have even entered my mind. . . To me (it was enough) for as long as I could get any kind of work, for as long as I am working. But now, since this happened. . . it’s because I was helped by many people who I do not even know, so now I also would like to help others.” – MG, 32, Kesenuma, Miyagi

5. What and How Filipinos Can Learn from These Experiences

This paper has used a narrative approach and focused on personal stories [14], of the experience of Filipinos in Japan during the March 11, 2011, earthquake and tsunami. We gathered in-depth insights from these narratives and from here looked at how to use all of the

lessons learned for our own local disaster risk reduction initiatives. The goal is to use these as part of how to improve our own local monitoring, early warnings and information, education and communication on earthquake and tsunami awareness and community preparedness.

Being aware of the historical tsunami events of 1611, 1896, 1933 and 1960, the governments of coastal cities and towns in Japan had prepared hazard maps, identified evacuation areas and guides or what to do, and had conducted drills in many coastal communities [7]. Even so, there were still many casualties in March 11, 2011, events. These narratives gave us glimpses of personal and social situations during the disaster and of the positive and negative outcomes to be learned from. We can adapt as good practice the positive ones and avoid repeating the negative ones. We see this as an opportunity for Filipinos to learn and improve focusing on (1) disaster education, information and communication – design of information materials, community and school drills; (2) earthquake and tsunami warnings; and (3) evacuation.

5.1. Disaster Education, Information and Communication

A main difference between Japan and the Philippines is that, in most coastal areas in the Philippines occurrences of historical tsunamis are infrequent and thus little remembered. Despite the significance of some of these events, few are not remembered except for the more recent – the August 17, 1976, Moro Gulf [21] and November 15, 1994, Mindoro [22] tsunamis. Consistent with earlier observations [2], one observation from the narratives is that the content of predisaster earthquake and tsunami awareness education had little information on scenario impact, timing between earthquake occurrence and tsunami arrival, and a lack of emphasis on intuitive observations of natural signs that could be used to understand phenomena and make an appropriate individual response. Note that “timing” or arrival times vary with the coastline and sea floor configuration and from place to place. This means simulation drills and evacuation timing and procedures may differ with the locality.

Respondents who have taken part in community drills mention being informed only about high ground, where to go and what to take with them.

“What is written in the flyers is where we should meet and what to bring (during evacuation).” – LM, 43, Soma, Fukushima

“We practice what to do if a tsunami arrives or if there is an earthquake. Yes, and they show you where safe places are. You go there or they will point out where the high ground is; several times they mentioned this, even in papers, on a map of where high ground is – ‘yama, yama’ is what they call the mountain.” – MK, Kamaishi, Iwate

It appears that predisaster activities emphasize evacuation drills and procedures too much and this has led to too



Fig. 3. An example of tsunami information material developed by PHIVOLCS in 2007, focusing on natural signs that people can observe.

Fig. 4. The 4 comics developed, based on 4 selected narratives. Comics 1. *Daang Mapanganib/ Dangerous Road* tells the story of IS, Fukushima. Comics 2. *Ang Huling Sayonara/ Last Sayonara* tells the story of LK, Ishinomaki. Comics 3, *Oras ng Peligro/ Dangerous Time* features the story of MG, Kessenuma and Comics 4, *Bagong Pagasa/ New Hope* is the story of HK, Rikuzen Takata.

much dependence on public address systems and sirens – when a siren is heard, go to the designated evacuation site. It was also recognized in the post-disaster survey that most people did not understand how a tsunami is created under the sea or how earthquakes and tsunamis is related [2]. Information education should emphasize the relationship of big undersea earthquakes and tsunami and not just conduct drills and tell evacuees where to go. The understanding of the science involved is also important. In some ways, the Philippines so far appears to be on the right track, because part of their program content is an overview of how tsunamis are generated and of earthquake and tsunami awareness capacity building for communities [13]. Our program emphasizes observational skills, focusing on the natural signs of approaching tsunamis, as is seen in information materials on tsunami developed by the Philippine Institute of Volcanology and Seismology (PHIVOLCS) after the December 2006 Banda Aceh, Indonesia, event (Fig. 3).

A more direct practical use of these study narratives is in developing information materials. Only a video documentary was at first planned from interviews. As we progressed, however, the team felt that information materials in print media will most benefit the Philippines. Four stories were thus selected as materials for comics (manga) in local languages developed within the year and distributed to the public in 2012–2013 (Fig. 4).

5.2. Warnings and Information

What worked and did not work in national and community warning and communication systems during events is what we can analyze and reflect on in relation to March 11, 2011, events. From narratives, we took into account an understanding of both the hardware system and message content during emergencies as practiced in Japan and reflected on the current status in the Philippines setting.

On the national level in Japan, the only agency monitoring and giving out information and warnings about earthquakes and tsunamis is the Japan Meteorological Agency (JMA). In its system at the time of the March 11 event, the JMA located the event and gave out initial information 3 minutes after, which was immediately broadcast [20]. Earthquake and tsunami information is received in various forms, the most significant being receipt by local authorities via wireless loudspeakers installed in communities and called the *bosai musen* (wireless disaster mitigation). For an earthquake and tsunami, warnings and information are provided through the wireless system by the JMA and sent through the *bosai musen* by local city offices to communities. This system was tested during the March 11 event and worked initially. It was found, however, that many people had difficulty hearing announcements because of reverberation or interference from nearby speakers. Some were unable to pay attention to warnings [2]. The positive side of sending out quick information was that warnings were sent out, but because warning information was preliminary, tsunami magnitude and height were underestimated – as mentioned in narratives, initial announcements described tsunamis 3 to 10 meters high [2, 7]. Later updated announcements were not received by the time of release at 15:14 and 15:30 JST [2, 7], because the tsunami has inundated most areas. Here it is clear that even the most well-planned system may fail at the most critical time. There is thus always a need for redundancy. In Japan, steps for improvement of warning system after the March 11, 2011, events have been engaged in [4].

The constant triggering of public sirens even during minor earthquake and “nonimpact” events may have also contributed to the response by some people when the big event finally occurred. Reviewing the narratives indicated that people did not respond immediately but felt no need to evacuate because of past warnings that had failed to be followed by the warned-of events [2, 7].

In the Philippines, with its long coastline vulnerable to tsunamis in offshore earthquakes, local government capacity varies widely, which means that some may have effective communication systems but others do not. There is still no unified communication system that links the national level to local governments for automatic dissemination even though the establishment of mass information dissemination is very important. Fast-tracking the establishment of cost-effective tsunami early warning systems on the local level should also be looked into more seriously.

The content of information messages transmitted must also be more thoroughly studied. In Japan, the announcement “*Hinanshite kudasai, hinanshite kudasai*” is probably sufficient. At the most critical times, the simplest, shortest, quickest most understandable message is needed. The question remains whether people will follow messages and be receptive to them? Again we return to the understanding of event preparation. This should have been done long ago through thorough well-planned information education and communication.

5.3. Evacuation

In earlier studies, it is worth noting how information recipients in a community reacted – ignoring warnings, not leaving home to evacuate, monitoring the situation followed an order before evacuated) [8, 23, 24]. As recognized earlier work emphasized that information per se determines whether people take action. The decision to evacuate reflects how people interpret information to make it meaningful [23]. Varying responses to calls to evacuate during an event may be related to or a result of the perception, experience, public education and relationship of variables. In the March 11, 2011, event, several respondents have heard other people – their in-laws, relatives or neighbors – say they would not evacuate, confident that no tsunami will come. Most mentioned that past tsunami warnings had not been followed, for example, by visible sign of significant changes in water, people to call or say that a tsunami had occurred. The existence of seawalls in some areas also provided a false sense of security [7].

In Sanriku coastal communities, people were taught the phrase “*tendenko*,” meaning to run for the high ground without worrying about others, even family members. The concept encourages people to escape by relying on their own individual decisions and responsibility using the principle that each individual’s efforts increases the possibility of survival [7]. There are also findings in a March 11 post-disaster survey that one reason people did not immediately evacuate was because of their concern for their loved ones. For example, 64% did not immediately evacuate to higher ground hut instead returned home by car to check whether family members were safe [2]. Would a similar “*tendenko*” concept work in the Philippines? In March 2011, many Japanese went returned home to check on the safety of family members, which is a culturally embedded response to family orientation, close family ties and taking care of family. Would this be changed if we introduced family preparedness. Part of family preparedness is to having prearranged meeting places in such events while family members are apart.

6. Conclusions

In a country such as the Philippines wherein earthquake and tsunami events in coastal communities are few and rarely remembered, narratives from survivors of the March 11, 2011, Great East Japan Earthquake are a source

of vivid descriptions that many could learn from. This event and its tragic impact provide a valuable opportunity to review areas of earthquake and tsunami: disaster education, information and communication, warnings and information and evacuation. The event itself tested procedures and systems potentially applicable in the Philippines. Lessons from its impact – from the need for clear messaging to setting up communications and the timing of warnings and advisories and understanding of what to expect and what to do when an event occurs – are issues that should remind others to take a look at the current earthquake and tsunami awareness and preparedness program in the Philippines that emphasizes understanding and observation of natural signs, especially local events, and encourages the establishment of community-based early warning systems. Recognizing that tsunamis are rare, it is sustaining these efforts to maintain awareness that is the challenge. The important concept of encouraging people to escape by relying on individual decisions and responsibility can be introduced.

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