

# Children of the Flood: The Effect of Flood on the Psychological Resilience of Children



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## Abstract

The Philippines' geographical location is along the typhoon belt. It is visited by an average of 20 typhoons yearly, leaving devastation trails. Despite this yearly occurrence, Filipinos, including children, remain resilient as they encounter such adversities. There have been some studies about Filipino resiliency and coping strategies amidst disasters; however, the literature on the resiliency of Filipino children during the disaster and its psychological effect remains underexplored. Using a phenomenological framework, this study explored the psychological resilience of children affected by floods. The findings of this study reveal that the psychological effects of the annual flood on the children relate to the following: emotion (sympathy and fear), behavior (securing their belongings, preparing food, staying in high places, cleaning, searching for lost things, and listening to weather forecast), and cognition (anxiousness, attentiveness, preparedness, sense of responsibility for others, and awareness of the importance of trees). This study also determined the main factors affecting the children's coping strategy: dependency on their parents, being accustomed to flood, their family, and their faith. The most outstanding and significant factor that significantly influences the children's coping strategy to become psychologically resilient is the culture of *bayanihan* in their community.

## Keywords

resilience, annual flood, *bayanihan*, children

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children's psychological resilience when experiencing natural disasters becomes the impetus of this study.

## 1. Introduction

The Philippines is a group of over 7,000 Southeast Asian islands. The Philippines is susceptible to tropical storms and suffers from various natural calamities because of its location along the geographical Ring of Fire and its proximity to the vast Pacific (Ang & Diaz, 2014). Over the years, the Philippines has been a hotbed of natural disasters such as tropical storms, tsunamis, earthquakes, and volcanic eruptions. Located along the typhoon belt in the Pacific, the Philippines is visited by an average of 20 typhoons every year and is left with trails of devastation that prove the Philippines' very vulnerable position in disaster vulnerability (PAGASA). According to the World Risk Report (2019), the Philippines ranked ninth as one of the world's most disastrous countries. Despite these natural disasters, Filipinos remain resilient as they encounter such adversities. Several studies have examined Filipinos' resiliency and coping strategies amidst disasters (Acosta & Macandog, 2016; Ang & Diaz, 2014); however, the literature on Filipino children's resiliency during a disaster and its psychological effect remain underexplored. Thinking along these lines, a study of

In the Philippines, Palawan, known for its beautiful island, rich marine resources, and virgin forests, is usually believed by most people to be the safest area for disasters (Lewis, 2014). However, Palawan is not exempted from natural disasters. Historical storm tracks and tsunami maps from the National Geophysical Data Center in 2018 reveal that Palawan has experienced tropical storms and is at risk to nearby tsunami sources. In 2017, as reported by Rappler News, Mangsee Island, Palawan's southern tip, suffered from casualties and property damages due to severe tropical storm Vinta, leaving at least 34 people dead and at least 59 others missing ("34 Dead in Palawan", 2017).

Punang is a village in the municipality of Sofronio Española, in the province of Palawan. It is located near the national road in the southern part of Palawan. Punang's topography is surrounded by mountains on the west and facing the Sulu Sea on the east, but its center is a vast plain. Thus, the topographical location of Punang is ideal for farming and provides the opportunity for fishing. Before 2018 ended, tropical storm Usman brought heavy rains to Punang that caused severe flooding. According to the National Disaster Risk Reduction and Management Council (NDRRMC, 2019), typhoon Usman claimed 75 lives, with 16 still reported missing and 12 injured. Regional offices also said that 45,348 families composed of more than 191,000 individuals were affected in CALABARZON regions



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(Cavite, Laguna, Batangas, Rizal, Quezon) and MIMAROPA (Mindoro, Marinduque, Romblon, Palawan). In terms of damage to infrastructure and agriculture, NDRRMC reported a total of P4.25 billion, with almost P949 million in farm losses and P3.3 billion in roads, bridges, public buildings, and private structures. Floods are among the most destructive calamities. They may result in millions of pesos of damage to roads and bridges, buildings, and other economic infrastructure, crops and livestock loss, and productivity loss in the industry. There is also an incalculable loss of human lives directly attributable to floods and the hardship and emotional impact on those affected. Like any form of natural hazard, floods do not only inflict loss of lives and costly property damage but also psychological harm.

The conceptualization and study of resilience have evolved in various disciplines concerned with adapting and recovering complex systems when faced with significant threats. Resilience is the ability to overcome challenges like trauma, tragedy, personal crisis, and direct old life problems and still bounce back stronger, wiser, and more personally powerful (Henderson, 2007). One of the traits that foreign people mostly admire from Filipinos is smiling despite life's challenges. The best example is the Filipino spirit of resilience after Typhoon Yolanda. Santos (2013) states that the super typhoon Yolanda left over 6,000 people dead, more than 28,000 injured, and nearly one million families displaced along its track. Despite the many destroyed properties and lives, the story of overcoming Yolanda's effects still shows resilience - the positive example of Filipinos recovering quickly from difficulties.

Furthermore, the values of fortitude and strength of the Filipinos have been passed down from one generation to another. It will not be a surprise if young Filipinos can endure and overcome such difficult situations. Children are dependent on their parents until they can live on their own. Hence, their parents play an essential role in building their resilience. Unfortunately, no matter how resilient Filipinos are, setbacks are always present, such as natural disasters. Natural disasters are inevitable phenomena between human beings and a dynamic environment. Subsequently, negligence on the possible psychological effect of natural disasters on children usually happens in Filipino culture. De Guzman (2018) stated that talking about mental health creates a stigma among Filipinos. She said that it could be why it is the Philippines with the highest rate of depressed people in Southeast Asia. She also cited the high number of cases among the youth. The 2015 World Health Organization school-based survey reported that 11.6% of 13 to 17-year-olds considered suicide, and 16.8% attempted it (as cited in Tomacruz, 2018).

These statements substantiated the Filipinos' resiliency as evidently present, especially in times of difficulties and crisis. It is difficult for adult Filipinos to start over after everything they own turns into scrap. However, most of the time, they manage to continue their lives as if nothing happened. How about the children who are still developing to become adults? What are the things that should be known from them after the calamity? What can be the possible effects of a catastrophe on them? How should it be properly addressed if there is an alarming effect on their psychological resilience? Will the children manage the aftermath of such a disaster if it happens repeatedly? Considering these questions, the researchers' query about the

children's psychological resiliency as they encounter such adversities becomes the driving force for this study.

## 2. Methods

A phenomenological-qualitative research method was employed to answer the queries raised in this study. The children's lived experiences and resiliency in the annual flood were subjected to thematic analysis through which the underlying themes and ideas were identified.

The 14 participants were selected through purposive sampling and were identified by the barangay officials and the teachers of Brgy. Punang Elementary School, based on the following criteria: (a) must be between seven to 12 years old; (b) must have been residing in Brgy. Punang, Sofronio Española, Palawan for at least five years; and (c) experienced an annual flood. The age requirement employed in this study was based on Piaget's theory of cognitive development. According to Piaget, seven to 12 years of age makes up the concrete-operational stage. During this period, children develop the ability to think logically and have more adult-like thought patterns.

This study aimed to study children's resiliency and coping mechanisms in the face of calamities. In collecting the data needed in this study, the researchers used the indigenous methods cited by Yacat (2013), such as (a) *pagmamasid* (observing), (b) *pakikipagpalagayang-loob* (building rapport), (c) *patanong-tanong* (asking questions), and (d) *pakikipagkuwentuhan* (having a conversation). *Pagmamasid* was first used to observe the participants' outward disposition during the visit. Then, *pakikipagpalagayang loob* was used to build rapport and a trusting relationship with the participants. *Patanong-tanong* was also used to start a conversation and to gather initial information about them. Lastly, *pakikipagkuwentuhan*, with the vignette method's aid, was used to gain in-depth and detailed information about the participants' lived experiences from the flood.

Focus Group Discussions (FGDs) were also used to collect information from the participants. The discussion focused on the participants' lived experiences and coping strategies in the annual flood. The researchers' guide questions were based on the research objectives and were given to the participants using the Filipino language. Questions during FGD were made simple according to the children's age so that they could respond accurately. Considering the participants' age, the researchers used the vignette method to prepare a video about the flood to prompt the participants' attention. The video aimed to stimulate their memories of their experiences during a flood.

The information gathered from the recorded interview was transcribed and underwent meticulous scrutiny. Data were then coded, and emerging themes and sub-themes from the extracted responses were identified, categorized, and continued until data saturation was reached. Data saturation means that additional interviews are no longer adding to existing thematic categories or creating new categories. This study applied thematic analysis to have a coherent and reliable interpretation of the data. Thematic analysis has been poorly branded yet widely used in qualitative research (Braun & Clarke, 2006) and has been rarely appreciated in the same way as grounded theory,



ethnography, or phenomenology. Braun and Clarke (2006) argued that thematic analysis should be a foundational method for qualitative research, as it provides core skills for conducting many other forms of qualitative analysis. Many authors have maintained that because the thematic analysis is a process used by many qualitative methods, it is not a different method, but rather something to assist researchers in the analysis (Boyatzis, 1998; Holloway & Todres, 2003; Ryan & Bernard, 2000). The thematic analysis helped the researchers to give distinction among the qualitative data by organizing them into groups. It also enabled the researchers to create appropriate themes for each group which was derived from the result of thorough analysis.

Ethical consideration is vital in any research study to ensure that participants know their rights and understand the research's nature and scope. Protocols were strictly observed in this study. The anonymity of participants was ensured in all parts of the study. Informed assent and consent were obtained from the participants and their parents, respectively. Confidentiality of information gathered was guaranteed in all research procedures. The researchers assured the participants that they could disclose important information to the researchers without worry.

### 3. Result and Discussion

#### 3.1. Profile of Participants

The researchers purposively selected a total of 14 participants. The participants were children aged seven to 12 years old and were living in the flood-prone area of Brgy. Punang, Sofronio Española, Palawan. Table 1 presents the necessary information about the participants. To protect the identity of the participants, they are given aliases.

Table 1. Profile of Participants

| Number | Alias    | Sex    | Age | Educational Level |
|--------|----------|--------|-----|-------------------|
| 1      | Porpot   | Male   | 8   | Grade 3           |
| 2      | Dodong   | Male   | 12  | Grade 7           |
| 3      | Muray    | Female | 9   | Grade 5           |
| 4      | Isabela  | Female | 8   | Grade 2           |
| 5      | Katong   | Male   | 8   | Grade 3           |
| 6      | Bebang   | Female | 12  | Grade 7           |
| 7      | Toto     | Male   | 7   | Grade 2           |
| 8      | Monmon   | Male   | 11  | Grade 6           |
| 9      | Nene     | Female | 10  | Grade 5           |
| 10     | Bongbong | Male   | 10  | Grade 6           |
| 11     | Inday    | Female | 9   | Grade 4           |
| 12     | Isang    | Female | 9   | Grade 4           |
| 13     | Kaykay   | Female | 10  | Grade 5           |
| 14     | Dada     | Female | 10  | Grade 5           |

#### 3.2. Problems Encountered From the Flood

Destruction is inevitable when calamity hits. An average of 20 typhoons have made landfall in the Philippines every year and caused floods, which have left severe destruction of houses and livelihoods and injuries and deaths of people in the country since 1990 (Acosta et al., 2016). Floods are the most common natural disaster occurring worldwide. The children of Brgy. Punang are not exempted from the consequences of such adversity. Even though floods happen yearly in their place, the past floods only caused minimal damage, and no casualty was recorded. However, the flood caused by the tropical storm Usman in 2019 brought numerous destructions to the children's community. The children in the said village witnessed floods ravaging their livelihood, properties, and livestock.

Floodwaters pose immediate dangers to human health. The children of Brgy. Punang experienced the possible danger created by the flood. Such threats are venomous animals, strong water current, and health problems like skin irritation. Inday, Bebang, and Isang narrated these dangers.

*Tsaka maraming mga ahas. Kung minsan natatapanan ko iyong mga scorpion. Minsan nasusugatan din kami. [There are many snakes. Sometimes I step on the scorpion and sometimes we get wounded.] (Inday)*

*Minsan po kasi malakas po 'yung agos. [There are times that the current of the water is so strong.] (Bebang)*

*Tapos may mga ipis na nakadikit sa lupa, mga ahas... kasi naga-ano siya ng kati-kati. Iyon lang po. [There are cockroaches and snakes at the bottom of the water... sometimes those irritate my skin.] (Isang)*

The above responses show that floods can impose a serious threat to someone's life if not considered. Ivers and Ryan (2006) explained in their study that the risk of infectious diseases after flood-related natural disasters was often specific to the event itself. In the case of the children of Brgy. Punang, the dangers that they stated above were the significant risks for them during a flood. The Center for Disease Control in 2018 reported that "outbreaks of communicable diseases after floods are unusual but ingesting or exposing an open wound to the floodwater increased the risk of diarrheal diseases or infection" (as cited in "5 Dangers to Be Aware of After a Flood Strikes", 2018).

Flooding has been shown to cause epidemics of water and vector-borne diseases (Kondo et al. 2002). Waterborne outbreaks of diarrheal illness after floods are thought to result primarily from water contamination, which occurs due to the disruption of purification and sewage disposal systems. Likewise, skin and eye infections often occur as a result of direct contact with polluted water. These include wound infections, dermatitis, and conjunctivitis. In one study conducted in Thailand, it was found that eczema is the most common skin disease during floods (Vachiramon et al., 2008). Also, leptospirosis is a common zoonotic infection in the world, according to WHO. This condition's primary sources are infected rodents and other wild animals that excrete leptospira in their urine (Vijayachari et al., 2008). Once excreted, bacteria can live long in freshwater, damp soil, vegetation, and mud.

Moreover, contact with contaminated water bodies is a potential cause of acquiring this disease. The dirty water creates a potential source of infection for those walking barefoot. Children who are attracted by puddles of rainwater are therefore at risk.

Facing disaster causes distress to everybody, not only psychologically but also physically. During heavy rainfall with accompanying floods, Muray and Dodong experienced cold weather conditions that gave them discomfort. The Philippine houses, especially in the countryside, are not designed for cold weather. The World Health Organization (WHO), as cited in the Philippine Council for Health Research and Development (<http://pchr.dost.gov.ph>), warned that the risk of suffering from hypothermia could be a grave threat to children if they

were trapped in floodwater for lengthy periods. According to WHO, Hypothermia is a medical emergency that occurs when the body loses heat faster to produce heat, causing a dangerously low body temperature. Children and older people are more at risk of hypothermia during floods.

When a flood happens, evacuation is necessary, especially if the place is already unsafe. Bebang and Monmon told the researchers that they did not like to leave their houses during the flood. All of the homes in Brgy. Punang are built to withstand a flood. The houses in their community are all elevated from the ground. During the flood, some children are not allowed to leave their homes, but others are obliged to evacuate and stay with their relatives. Their houses are fully submerged in water, and to avoid possible danger, they must evacuate. When persons are forced to evacuate from their place of origin, it gives them discomfort and sadness because of their sense of place. Sense of place is a multidimensional concept consisting of place dependence, place identity, and place attachment aspects (Anacio et al., 2016). In the study conducted by Munro et al. (2017), people who were displaced from their homes were significantly more likely to have higher scores on each scale for depression, anxiety, and post-traumatic stress disorder than people who were not displaced.

Preparing for a flood and dealing with its aftermath are difficult for children. The children narrated the hardships they experienced in handling the consequences of the flood. They did the chores assigned to them by their parents. They also had to deal with muddy roads in going to school. The recent flood caused damage and brought difficulties to the children. The hardships encountered by the children of Brgy. Punang might affect their development if the severity of the flood damage was higher than what they had experienced. Healthy children who experience too much stress will likely lag far behind their age-mates in physical growth and motor development (Shaffer & Kipp, 2014).

A disaster such as a flood comes in life's most unexpected moments. As for the children of Brgy. Punang sometimes happens during their class days and sometimes during important occasions. Two participants expressed disappointment over lost opportunities like attending school and celebrating the New Year on January 1, 2019.

*Hindi makapasok... dalawang araw.* [We cannot go to school... for two days.] (Murray)

*No'ng January 1, iyong hindi ko talaga makakalimutan New Year 'yun tapos nagbaha. Hindi na kami naka-celebrate sa mga pinsan ko.* [One thing that I could never forget on the flood that happened on January 1, we were not able to celebrate New Year with my cousins.] (Kaykay)

Murray was disappointed that classes were disrupted because of the flood. In line with this, research conducted in Muzarabani District, Zimbabwe, indicated that floods caused the loss of learning hours, loss of qualified personnel, an outbreak of waterborne diseases, high absenteeism, and low syllabus coverage resulting in children's poor academic performance (Mudavanhu, 2014). In the study conducted by Akello (2014), the flood not only closes schools but also destroys infrastructure and makes roads unacceptable for

students. In addition, families may lose their livelihood and cannot send their children to school.

Because Filipinos are accustomed to celebrating special occasions like New Year with their families, failure to observe this kind of event because of bad weather conditions is considered a problem, especially if planned ahead of time. Kaykay viewed it as one of her unpleasant experiences caused by the flood.

### 3.3. Psychological Effect

When someone is exposed to a severe threat, fear is a normal response. Like other disasters, severe storms and flooding can result in not only damage to property but also emotional distress. As flood usually happens in Brgy. Punang, the severe flood they experienced in 2019, made them fear the risks and the grave threats that flood could inflict on them.

*Natatakot po, gano'n po. Tapos... tapos pag-ano... 'pag nangyari po sa amin na ano... masyadong nakakatakot kasi po 'pag nalubog 'yong bahay namin wala na kaming mapupuntahan.* [We are afraid. Because if we experience severe damage, if our houses will be submerged to water, it will be so scary because we have nowhere to go.] (Kaykay)

*Nakakabahan po ako kasi po baka may maaksidente. Mamaya ako 'yong maaksidente... 'yong January 1 kinakabahan po ako ay baka po may malunod. 'Yong bakod po lubog na po 'yan.* [I am nervous because someone might have a fatal accident, and it might happen to me as well. On January 1, I was nervous because I thought that someone could be drowned. That fence over there, it was fully submerged in water.] (Bongbong)

*Takot po. Baka po kasi... meron pong madisgrasya sa pagkiddlat po... sa mga pagkaputol po ng kahoy.* [I am afraid. Because someone might be struck by lightning or someone could be injured from the falling trees.] (Bebang)

Their fear came from what they had experienced and from what they had witnessed. No casualty concerning the flood was recorded from the community. However, the damage it caused to the people was severe. The fear of the children for themselves and their community whenever there is a flood is part of the flood's effect on their emotional aspect. This fear is deemed normal because the children were facing a grave danger. Several studies have shown various symptoms from exposure to natural disasters such as flooding. According to Mason, Andres, and Upton (2010), individuals may experience depression, anxiety, and post-traumatic stress disorder symptoms. This result corroborates Chae et al. (2005) findings that the residents in the disaster-exposed group experienced higher levels of stress, anxiety, depression, and post-traumatic disorder compared with those in the non-disaster group.

As the children experienced the annual flood occurrence, they could grasp the difficulties it brings. When asked how they felt when they heard the word flood, they answered that they knew how difficult it was to deal with its effects. Although all the children who participated in this study



experienced the same flood every year, some residents' struggles were greater than others. The children witnessed with their own eyes the destructive force of the flood. Hence, the children learned how to empathize at a young age. They knew the feeling of struggling from a disaster.

### Behavioral Effect

The most prominent behavior manifested by the participants before the flood happens is securing their valuable things. They help their parents put their important stuff in high places to avoid being wet and lost. They learn to secure items at a young age before a disaster happens. The people of Brgy. Punang prepare for the annual flood by elevating their houses from the ground and having a place inside their homes that is high enough to secure their valuables. Surge is expected in their community at any time of the year, especially with heavy rainfall. The children's behavior towards anticipating flood is securing their valuables because they also see their parents doing it. When a flood occurs, it becomes part of their yearly routine to put their things in high places before they can be damaged.

Food is one of the basic needs of every human. In times of flood, food and water are essential for survival. A disaster like a flood can cause food and drinking water scarcity. To avoid this, the children help prepare their basic needs, such as food and water, beforehand to ensure they have something to restore their energy during and after the flood.

*Naghahanda ng mga pagkain at saka humahanda ng mga kagamitan... [flashlight pati mga pagkain, mga tubig. [I prepared food and some other stuff like flashlights and water.]] (Nene)*

The participant named above always prepares ready-to-eat food and water to drink before a flood occurs. During the flood, she and her family could not leave their house, and after the flood, she had to assist her parents in cleaning the mess and fixing the damage brought by it. They need to have something to eat and drink to deal with the hardships of the flood.

The children know that staying in high places in times of flood is a must. It is one of the safety precautions to avoid danger. Their houses are designed to prepare for floods, as mentioned earlier. During the flood, the children stay at the highest place in their homes while helping their parents to arrange their belongings. Others exhibit a sense of calmness. Children know that panic will not help during the flood. Instead, they help their parents when things still need to be put in high places. They also find activities inside their room while waiting for the water to subside. Their room is designed high enough to prevent the floodwater from entering. Their calmness during the flood is exemplary.

Scattered garbage, muddy roads, fallen trees, and ruined belongings are the common scenarios the children face after the flood. When asked what they always do after the flood, the children answered 'cleaning.' Given the disorder and the untidiness brought by the flood to their community every year, the children learn the value of cleaning and helping their parents do the job efficiently. Instead of being idle, the children participate in their community's collective effort to clean their surroundings after the flood. Cleaning the garbage and organizing things are children's typical responses after the water subsides. As explained previously, they assist their parents in doing the chores even if some are hard for them.

The recent flood caused so many losses to the people of Brgy. Punang. Some can be retrieved, and some are lost forever. As they experience floods yearly, two participants always search for their lost belongings like slippers and other things that can still be used after the flood.

*Hinahanap po 'yung mga ibang nawawalang tsinelas... 'yong mga tsinelas lang po namin. [I was searching for our lost slippers from the flood.] (Katong)*

*Tumutulong maghanap ng mga gamit na nawawala. [I helped my parents to find our lost things from the flood.] (Dodong)*

Katong and Dodong searched for those things that could be retrieved. Their things that are usually put outside the house, like slippers, laundry bowl, and water pails are often lost after the flood. They search for them, hoping they can still be found.

The weather forecast is significant. It will give everyone information and warning for bad weather in advance. After the devastating flood that hit the community of Brgy. Punang, Inday starts listening to the weather forecasts to prepare for the upcoming flood.

*Kapag nalinis na lahat ang mga gamit na gingtaas naming, iyong nakalagay sa taas ng bahay ginababa na namin. Tapos ginabuksan namin ang radyo kung may kasunod pa na baha. [When we finished cleaning our house, we put down and organize those things that we put in high places. After that, we open the radio so that we will know if there will be the next flood.] (Inday)*

Children nowadays are not accustomed to listening to the news on the radio. Many children do not also like to watch news and weather forecasts; however, the children of Brgy. Penang, like Inday, has learned the value of being updated with weather conditions. She knows it will help her prepare for the upcoming flood.

### Cognitive Effect

As the children encountered and witnessed the grave danger of flood to their community, they were anxious about the worst thing that could happen. They were worried about their safety and the people around them. They were also concerned about the strong current reaching their home and the fatal lightning that could strike anyone. These could be attributed to what they went through on January 1, 2019. According to the Center for Disease Control and Prevention (CDCP), children may develop symptoms of anxiety, depression, and post-traumatic stress disorder after a disaster. The children understand less about the situation, feel less able to control events, have less experience dealing with a stressful situation, and may not communicate their feelings, such as fear or anxiety (CDCP, 2019).

A flood can cause unimaginable damage to a particular community affected by it. Flood is a great problem, especially if it happens yearly, just like in Barangay Punang. Nevertheless, despite the children's yearly experience of a flood, they do not fall into despair but gain a strong sense of awareness and increased vigilance to danger by being attentive to what they should do. During and after the flood, the children are cautious about how much the flood

has damaged their surroundings. They observe the falling trees and the electrical wires that can cause severe harm. Children learned about being attentive to danger during and after the flood. Having a sense of safety in flood times is one of the admirable traits that can be noticed among the children.

Problems that keep repeating will probably burn out anyone but not the participants in this study. Growing up with flood as part of their yearly life teaches them how to prepare for it when it happens. They know they must be ready and mindful of their belongings before and during the flood. They also know that they must be alert and prepared for the consequences of floods. They also give importance to the value of teamwork in facing disaster.

They always ensure they are ready to face it with their family and community before a flood happens. Luthar, Cicchetti, and Becker (2000) stated that the two essential factors of child resilience were serious threats to adaptation or development and achieving a positive and good outcome. The study by Hassan, Singh, and Sekar (2018) stated that children showed high levels of intrusion and avoidance in the aftermath of floods. Both boys and girls who experienced the flood disaster in September 2014, which wreaked havoc in the Jammu and Kashmir region of India, showed moderate to severe psychological impact on the domains of the Children Revised Impact of Events Scale (CRIES). In contrast to the previous study's finding, severe flood threats to the present study's participants helped them achieve a positive outlook in combating it and employing preparedness. Due to the annual and devastating floods of January 1, 2019, their sense of readiness is quite remarkable. The participants in this study did not experience any loss of loved ones, unlike Jammu and Kashmir's children in India (Hassan, Singh, & Sekar, 2018).

The children who experience the annual flood live in different village areas. Some are near the Punang River, others near the shore, and the rest far from water bodies. According to the village officials, the flood always starts from the river. Dada, who lives near the river, feels responsible for others by warning her neighbors when she sees the river's water is already rising. Filipinos have a collective culture wherein they view one another as part of one community. Dada knows she is part of their community, and they are responsible for one another during the flood. She lives near the Punang River, and she always warns neighbors to also prepare for the flood.

Trees are a significant part of nature. They supply oxygen for breathing and water for drinking. One of the children out of 14 participants emphasizes the importance of trees in preventing a flood. However, the leading cause of flood in Punang is its location and not the lack of trees, as the barangay officials stated. Even if that is the case, Bongbong realizes the vital role of trees in preventing disasters like floods.

*Ano po, kung magsunod lang sa akin ang mga tao pagsabihanko po sila na huwag ng magputol ng mga kahoy para hindi na magbaha. [If people will listen to me, I will tell them to stop cutting the trees so that there will be no flood.] (Bongbong)*

There is a loss of trees in the mountains near Bgy. Punang can be observed because of the *kaingin* (clearing the mountain area by burning trees to plant crops) of a particular ethnic group living in those places. Bongbong attributed the loss of trees to the flood to his community annually.

### 3.4. Factors Affecting Punang Children Coping Strategy

#### Dependency on Parents

Until they become adults, children are dependent on their parents (Shaffer & Kipp, 2014). In line with this, the children become more dependent on their parents during the flood. Their parents are the vital sources of their psychological resilience. They exhibit a sense of calmness during the flood because they know that their parents will take care of them, and it is noticeable in their behavior during the flood, as explained above. When asked how they coped with a flood yearly, they answered that they would be fine as long as their parents were with them. Stafford et al. (2018) stated that children's dependency on their parents and how parents respond to the disaster significantly impacted their coping strategy in dealing with the aftermath of any calamities (Stafford et al., 2018). Bowlby (1969) emphasized in his study the role of the primary caregiver in helping the child to develop healthy attachments, a sense of self, and a sense of self-efficacy. In the case of the present study's participants, their primary caregivers are their parents.

#### Being Accustomed to Flood

Encountering a repetitive flood situation teaches the participants how to deal with it positively every year. They feel stuck in this situation to the point that it becomes part of their mindset to prepare for it and manage the problems it causes. Experiencing the flood annually gives them insight into what to do every time it happens.

*Wala na rin pong magawa eh, kay dito kami nakatira. Dito rin kami isinilang. Pagtiisan na lang kung anong meron ditong baha. Kay sanay na din kami eh. Kung anong ginagawa ng baha gano'n din, paulit-ulit lang. [We cannot do anything to stop it. We were born here, and we live here. We will endure the flood here because we are used to it. It is just like experiencing a cycle of flood every year, and it is almost the same.] (Monmon)*

*Kinakaya pa rin namin na kahit ano taon-taon bumabaha humahanda rin po kami... kasi naranasan na namin eh. [We are trying to be strong even if we experience a flood every year. And every time it happens, we always prepare because we are already accustomed to it.] (Dodong)*

Being accustomed to floods has a significant contribution to their psychological resilience. Armstrong, Birnie-Lefcovitch, and Ungar (2005) considered that the child's developmental pathways contributed to multiple levels of influence on his/her resilience. The participants are children born in a flood-prone area. Growing up, they have seen their family and community dealing with a flood yearly. The children also adopt that behavior. They healthily cope with a flood because it is part of their reality, and they must confront it with strength and courage.



## Family

Filipinos are known to be family-oriented. Two participants strive despite the flood for their parents and their family. Their loved ones give them a reason to move forward despite their challenging situations from the flood. Inday and Isang shared their story about dealing with a flood every year.

*Iyong mga gamit po namin tsaka iyong pamangkin ko kay hindi po kasi kaya nila mama kasi kambal dala-dalawa. Hindi nila kayang asikasuhin ang baby... para matulungan sila Mama... kasi hindi rin nila kaya minsan. Kasi minsan marami din dapat itaas. Mga importanteng gamit. [During the flood, I help secure things and take care of my two young nieces, who are twins. Because my parents can't do it all by themselves, I do it to help my parents because sometimes, they are also having a hard time, especially when there are many important things to be secured in high places.] (Inday)*

*Ginaligpit na lang tapos ginalagay na lang sa mataas na lugar... para makatulong sa magulang... kasi nahihirapan na rin silang magligpit ng mga gamit. [I assist in organizing things that will be put in a high place so that I can help my parents. Because I can see that they also find it difficult and hard to organize and secure things during the flood.] (Isang)*

Dealing with the aftermath of a flood is indeed hard for the children. As Beresford explained in his study, the absence of a coping resource could make an individual more vulnerable to stress (Beresford, 1994). However, Inday and Isang faced the flood with unwavering and unselfish attitudes toward their parents and families. As Filipino children who are family-oriented, the family is their source of inspiration to become resilient no matter how challenging the situation. The family gives them a reason not to give up when a flood hits their community.

## Faith

The Philippines is the only Christian country in Asia (Miller, 2019). This fact about the Philippines speaks about how much Filipinos hold to their faith in times of tragedy. One of the children told the researchers that she had just prayed in the hope that the flood would stop. In times of disaster like flood, Dada's faith in God makes her believe everything will be fine.

*Umaakyat po ako sa kwarto tapos nananalangin po ako na sana huminto na po 'yong baha. [I go inside my room, and I pray to hope that the flood will stop.] (Dada)*

Many mental health workers consider seeking a spiritual understanding of one's place in the universe important in overall health and well-being, including disaster management intervention (Sipon et al., 2015). Given the potential effects of spiritual and religious beliefs on coping with traumatic events such as flood disasters, Sipon, and his colleagues conclude that the role of spirituality in fostering resilience in flood disaster survivors helps human adaptation to trauma.

## Bayanihan

*Bayanihan* is known as one of Filipino culture's positive characteristics, which is also possessed by participants of the present study in coping with the annual flood. *Bayanihan* is a spirit of civic unity and cooperation among Filipinos (Bayanihan, n.d.). In the study conducted by Chang (2009), he observed a sense of unity within the community after the flood in Carlisle, Cumbria, United Kingdom. However, Chang (2009) also observed that Carlisle's people turned to their self-interests when the severity of the flood's damage increased. It contrasts with what happened to the participants of the present study. The more they experienced the graveness of flood, the more their people united to overcome it. The civic unity among them, called *bayanihan*, became concrete and was seen through their actions for one another.

The children cope together with their community. They realize the value of helping each other in times of need. Seeing the collective effort of the people around them helps the children to surpass the adversity of flood. Children learn from the example of adults. The positive interaction and the support of their community for one another significantly affect how they cope with the flood. The majority of the coping resources of the children of Brgy. Punang is themed under *bayanihan*. Enriquez (1992) presented a core concept of Filipino psychology: *kapwa* (as cited in Yacat, 2013). Enriquez defined *kapwa* as recognition of shared identity, an inner self shared with others. The children of Brgy. Punang shares the same struggles with their community; they face it together by helping one another in times of flood. Their community also showcased *kagandahang-loob* to each other, highlighted during the devastating flood on January 1, 2019. *Kagandahang-loob* (shared humanity) was also first identified by Enriquez in 1992 as a value that links the self to society or "linking socio-personal value" (as cited in Galano, 2017). These values within the context of Filipino psychology leave a significant impact as one of the coping strategies of the children of Brgy. Punang during a time of disaster like a flood. They know that they are not alone during the flood, but they face it together with the people around them.

## 4. Conclusion and Recommendations

The annual flood experienced by the children of Brgy. Punang makes them develop and foster a highly resilient attitude towards it. The role of their primary caregivers, who are their parents, helps in molding their psychological resilience. Furthermore, the culture of *bayanihan* plays a significant role in children's psychological resilience. The resilient attitude of their community significantly contributes to their coping strategy. The unity of the people around them in helping one another shows an excellent example of the children being part of a collective effort to recover from the aftermath of a flood. The children suffered from several problems from the flood-like destruction and loss, danger, sensitivity to cold weather, evacuation, hardships, disruption of classes, and missed opportunities for school and special events. Their support system for bouncing back from difficulties caused by a flood is strong and firm, as evidenced by this study's findings. Although the children display signs of apprehension and emotional distress towards flood, it does not significantly affect their psychological resilience. Instead, they foster the attitudes of safety, preparedness, courage, endurance, and calmness. They also exhibit compassion and care towards other victims who suffer greater challenges than them. Faith in God is also one of the children's fortress to overcome their

challenging situation. Their care for their parents and family also inspires them to endure the hardships of the flood. Overall, the children of Brgy. Punang's psychological resilience is largely influenced by their environment and the Filipino attitude of positivity despite adversity. As this study affirms, *bayanihan* can significantly boost Filipino children's psychological resilience in facing natural disasters such as floods. On an international scale, civic unity within the community during a disaster will significantly influence the children to develop a strong psychological resilience.

This study's contribution shows the importance of one's community in molding children's resilience. It also emphasizes and supports the existing literature on how parents' response to disaster affects their children's perspective in handling it. Furthermore, the Filipino culture of *bayanihan*, faith, family-orientedness, and positivity despite adversity can be evidence of effective and collective recovery after a disaster.

Considering the results presented in this study, the researchers would like to recommend the following to DRRM in partnership with DSWD. They must encourage the children living in flood-prone areas to foster a resilient attitude towards disaster. This can be done by providing children with training in disaster preparedness. They can also train the parents to exercise precautionary measures to secure their children's safety during calamity, such as a flood. Providing seminars and programs for parents on how to deal with their children during disasters positively will be a great help. Parental counseling is also deemed helpful and, therefore, recommended. Developing teachers' programs in flood-prone areas to teach children safety tips and positive responses to disasters is also highly recommended. Giving lectures, seminars, and workshops to the people living in a flood-prone area to boost their collective effort to overcome flood adversity is essential, especially to the children. Spreading awareness of the positive impact of *bayanihan* in a community will help sustain disaster survivors' resilience. The positive interaction will lift the people's morale to face struggles with courage and hope.

Furthermore, it is recommended to the local government of Palawan that evacuation centers for flood-prone areas like Brgy be established. Punang be built. The evacuation centers will be a great help to the residents, especially to the children. Children feel uncomfortable leaving their homes, but they see the necessity to evacuate for safety purposes. Providing a comfortable temporary shelter and orienting the residents, especially the children, about the importance of evacuation in times of disaster are important. It is also recommended that the flood-prone area of Bgy. Punang will be studied to identify appropriate measures that will prevent the annual occurrence of floods. This recommendation is given to prevent casualties and, most significantly, psychological distress among the vulnerable children living there.

This study can be used as a basis for Filipino children's resilience and the factors that affect it. Other studies on children who are affected by flood or any disaster may be conducted, taking into account the following cases: without parental support, suffering from extreme devastation and casualty of loved ones, and seriously injured children. These are not explored in the present study. Thus, considering the suggested cases will be a good continuation of this research. It is hoped that this research will pave the way for the

development of an effective psychological intervention for Filipino children who are survivors of disasters.

### Declaration of Conflict of Interest

The researchers declare that there is no conflict of interest in this study.

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