

## **EXPLORING FILIPINO KINDERGARTENS' PERSPECTIVE ON DISASTERS: A DESCRIPTIVE CASE STUDY**

Liza Cordero Legaspino<sup>1\*</sup>, Leonora Parungao Varela<sup>2</sup>

<sup>1,2</sup>Philippine Normal University, Manila, Philippines

legaspino.lc@pnu.edu.ph<sup>1</sup>, varela.lp@pnu.edu.ph<sup>2</sup>

\*Corresponding Author

**Received:** 30 November 2021; **Accepted:** 05 April 2023; **Published:** 11 April 2023

**To cite this article (APA):** Legaspino, L. C., & Varela, L. P. (2023). Exploring Filipino kindergartens' perspective on disasters: A descriptive case study. *Southeast Asia Early Childhood Journal*, 12(1), 24–39. <https://doi.org/10.37134/saecj.vol12.1.3.2023>

**To link to this article:** <https://doi.org/10.37134/saecj.vol12.1.3.2023>

### **ABSTRACT**

Disasters continue to have adverse effects around the globe leaving many lives susceptible to hazards and fatalities most especially children. The Philippines, known to be one of the most disaster-prone countries in the world, experiences earthquakes, typhoons, and flooding yearly. For the reason of the country's vulnerability to disasters, it is expected that both adults and children can demonstrate preparedness to such disasters. Hence, in order to improve the disaster preparedness of kindergarten pupils, we must begin looking at their perspectives before conceptualizing kindergarten lessons about disasters. This study focused on Filipino Kindergarten's perspectives on disasters. This study sought to; (i) describe children's perspectives on disasters; and (ii) determine significant concepts that can be used for School Disaster Risk Reduction Management specifically for kindergarten. The cases were kindergarten pupils from different public schools residing in Metro Manila. There were nine (9) cases, three Kindergartens per specific type of disaster experienced, whether earthquake, flooding, or typhoon. Based on the findings of the study, children have perspectives to which their capacity to express their knowledge, feelings, plans, actions on disasters are manifested. Children also have the competence to think of other's welfare in the event of disasters and are interested to learn more about disasters as they have suggested ways in which they can enjoy learning about Disaster Risk Reduction (DRR).

**Keywords:** kindergarten, children's perspectives, disasters, early childhood education

### **INTRODUCTION**

Disasters worldwide from a 10-year time frame have a continuous escalation that affects many lives – including the safety and welfare of communities around the globe; giving its meaning as the grave operational disruption of a community brought by any hazardous event that causes effects and fatalities (United Nations International Strategy for Disaster Reduction [UNISDR], 2009). It brought susceptible events to over 1.5 billion people all over the world who have been affected by disasters. According to the UNISDR (2009), disasters are results of natural hazards. In 2018, 60 million people were afflicted and 315 natural disaster events were recorded in the Emergency Events Database. It is a progression of dangerous events whether phenomenon or human activity that may result in injury, death, health, property, social, economic or environmental related consequences (Kafle, 2017).

In a particular part of the globe, Asia, encountered the most number of events related to disaster in the year 2018 (Centre for Research on Epidemiology of Disasters [CRED], 2019) due to the shifting geography of disaster risks and fragile environments that is uniquely found

in this continent (United Nations et al., 2019). Southeast Asia is rich in culture, history, nature, and diversity and at present, most of its countries are developing with considerable growth rate. Climate change and natural hazards present in Southeast Asian countries make the population and livelihood sternly affected by disasters (The World Bank, 2010). Asia's biggest cities are vulnerable to the consequences of climate change due to the location on the coast and within major bodies of waters and coastlines (Southeast Asian Ministers of Education Organization Regional Center for Educational Innovation and Technology [SEAMEO InnoTech], 2014). Disasters will continue to be an obstacle to sustainable development due to the frequency increase of climate change and intensity of extreme weather events (CRED, 2017).

Coined by the United Nations Department of Economic and Social Affairs (2014), the term megacity refers to over 10 million people living in a city. The effect of climate change on megacities of developing countries will be all-round and intense because of its quick growth rate and weak adjustment (Azan Hossain, 2015). Most locations of the biggest cities in Asia are on the coast with large bodies of water which can expose them to the intensity of climate change (SEAMEO InnoTech, 2014). Developments that are not properly planned can bring danger and increase susceptibility when disasters strike (Fawcett, 2012).

One of the most disaster-prone countries in the world, the Philippines, remains to be exposed to climate-related effects namely droughts, floods, landslides, and typhoons (Agbon et al., 2017; World Bank, 2013). Subsequently, Metro Manila as one of the megacities in Asia has an upsurge in urbanization and population that leaves it exposed to natural disasters (Shaw et al., 2010; SEAMEO InnoTech) 2014). The people in this megalopolis comprises a large number of slum households which are susceptible to flood due to geographic structures and several occasions of heavy rains (Alcayna-Stevens, 2015).

According to SEAMEO Innotech (2014), disasters may happen at anytime and anywhere that puts children, adults, or families of any age and gender in the community at high risk. Over 100 million children ages 0 – 17 years old in Southeast Asia are being vulnerably afflicted by disasters yearly (SEAMEO InnoTech, 2014). Vulnerability refers to the unavoidable resistance to hazards that forms from exposure to disasters (Lawler & United Nations International Children's Emergency Fund (UNICEF), 2011). Children are anticipated as defenceless in contrast to adults (Norozzi & Moen, 2016). With this image, they are seen as vulnerable because they are easily affected compared with adults, considering the diverse needs and different attention in the aftermath of exposure to disasters (Heintze et al., 2018). On the publication of UNICEF's Annual 2018 Report, there is an increase of number of children residing in the urban areas hence, stretches also the likelihoods that these children are more susceptible to risks (UNICEF, 2019). In the study conducted by Kousky (2016), children in nature are fragile, more than ever after a disaster for the reason that they have different needs in which essential care, nutrition and attention must be met. The vulnerability seen in children is associated with the general perception that children are either helpless or capable young individuals (Kousky, 2016). The worsening conditions on climate change and disaster risk reduction overlooks the role of children and youth concerning disaster readiness (Seballos & Tanner, 2011). Also, challenges on children's safety may be evident when excluding them in disaster planning (Harwood et al., 2014).

It is through with different studies that a child's capacity to be involved in contributing and participating in activities for disaster preparedness is emerging. A child is identified with rights and has the ability to express opinions in the choices that involve his or her life (Mutch, 2013). Seeing children as passive victims forgoes the idea that children have perspectives that

can be useful to show their capabilities (Lansdown, 2011). This research explored Filipino kindergarten's understanding of disasters as currently, there is a dearth in literature and studies taking into consideration their perspective. Further, in the Philippine context, there is no available study yet that has been conducted in the area of DRR in the Kindergarten level. Coming from the children's own perspective, the study seeks to add developmentally appropriate lessons that may be helpful in the Kindergarten Curriculum about Disaster Risk Reduction.

## **METHODOLOGY**

### **Qualitative Design**

The research design used for this study is a qualitative method. Data gathered from this study depended on the interviews collected from participant's experiences (Creswell & Creswell, 2018). This study used the descriptive case study approach that provided the researcher to; (i) describe children's perspective on disasters; and (ii) determine the significant concepts that can be used for school disaster risk reduction management specifically for kindergarten.

### **Research Site**

The cases gathered were pupils residing in Metro Manila, as this is one of the megacities of Asia (SEAMEO InnoTech, 2014). Metro Manila is also recorded as the largest population of disaster-prone urban areas (Rosengard & Jefferson, 2019). The sixteen cities that composed Metro Manila are the following: Manila, Quezon City, Caloocan, Las Piñas, Makati, Malabon, Mandaluyong, Muntinlupa, Navotas, Parañaque, Pasay, Pateros, San Juan, Taguig, and Valenzuela. It was narrowed down to the children who have experienced natural disasters in the said cities.

### **Selection Criteria and Participants**

This study went through two tiers of purposive sampling. First, the participants are enrolled Kindergarten pupils from different public schools residing in Metro Manila, an area prone to natural hazards such typhoons, flooding, or earthquakes. As stated in the School Disaster Risk Reduction Booklet Manual of the Department of Education (2015), tropical cyclones, flooding, and earthquakes are the top three school hazards in the Philippines. Thus, the researcher selected through purposive sampling, nine (9) cases, three (3) kindergarteners, regardless of gender, per identified disaster. There were no sensitive issues that were asked of the participant since the primary objective was to get their knowledge, feelings, actions, and plans on a specific natural disaster they have encountered.

### **Data Collection**

The initial phase of the study was through seeking the approval of the parent or guardian of the selected participant. A consent letter was given and explained to the parents/guardians of the chosen participants. The researcher explained to the parents /guardians the objectives of the study. This ensured that the participant is protected from any risk. The researcher, as an early

childhood practitioner, also took into consideration the participant's developing social and emotional skills and used co-construction learning as a strategy to establish a conversation (Tay-Lim & Lim, 2013).

Face-to-face semi-structured interviews were conducted to find answers to questions which can also be expounded further to seek understanding on a particular topic. Further, it is suitable for young children because they can determine the direction of the interview depending on the choice of topic that makes sense to them (Mukherji & Albon, 2018). The formulated interview guide questions had undergone pilot interviews to ensure that questions that will be asked to the participants are substantial (Merriam, 2009).

The use of audio recording material was used to capture fully the responses of the participants as this is one of the included types of data recording procedures of a qualitative research (Creswell & Creswell, 2018). This procedure guaranteed that data collected is well-kept for analysis (Merriam, 2009).

## **Data Analysis**

Inductive method was used as detailed information and data was first acquired before conceiving general themes (Creswell, 2014). The researcher transcribed the data through the use of hand analysis of qualitative data (Creswell, 2014) since the data is small in number of pages. After which, the transcriptions gathered followed Tesch's Eight Steps in the Coding Process which reflected specific coding procedures. The steps are as follows; (i) transcriptions must be read carefully and write notes that comes into mind; (ii) choose one document and write the discoveries that it is trying to unveil; (iii) group the topics that were extracted from some of the participants to be able to put them into columns; (iv) check the data again and write codes to some areas of the document and try to look into if new codes shall emerge; (v) categorize the topics and trim the list that is related to each other; (vi) place abbreviation and alphabetize the codes; (vii) arrange the data that is part of a particular category and make initial analysis; and (viii) recode the present data only if it is needed. The gathered data are the basis for the extraction of interpretation that may be highlighted from the strategies used by the researcher. Thus, the data that were transcribed were fragmented to codes and developed to themes with their descriptions (Creswell & Creswell, 2018; Mukherji & Albon, 2018).

## **RESULTS**

A total of nine (9) five-year old participants who are residing in different cities of Metro Manila were interviewed to elicit their views on disasters.

### **Children's Knowledge on Disasters**

Children described their knowledge on disasters, although limited in their vocabulary, were still able to express their views on what disasters mean to them. They have their own way of understanding the risks that is different from adults' knowledge (Fawcett, 2012). Children's perspective on natural disasters is useful to further gauge their understanding of a concerning hazard to their environment (King & Tarrant, 2013). Even though children are seen as the most vulnerable during natural disasters, their responses and attributions matter to help improve

outcomes in the event of a disaster. Thus, children's perspective on disasters is based on his or her knowledge, whether factual or false, serves as the foundation to his or her understanding about disasters. (King & Tarrant, 2013; Kousky, 2016).

Table 1

*Summary of the children's perspective on a particular type of disaster together with their sample responses.*

Type of Disaster	Themes	Description	Participant	Sample Response
Bagyo (Typhoon)	Heavy Downpour of Rain	This pertains to how children describe their perspective of typhoons.	T1	<i>Nasisira ng mga bahay, kasi ang lakas ng hangin.</i>
			T2	<i>Ang lakas ng ulan. Bumabaha rin yung daanan, tapos nagliliparan ang mga yero.</i>
			T3	<i>(The houses are destroyed because of the strong wind and rainfall. There is also flooding and zinc metal roofing sheets that are being blown away by the typhoon.)</i>
Baha (Flooding)	Wavelike Water	This pertains to how children describe their perspective of flooding.	F1	<i>Maalon.</i>
			F2	<i>(The movement of the water is like of the waves of the sea).</i>
			F3	<i>Tubig. Sasakit kasi hindi yung tubig, sa ano, sa dagat.</i>  <i>(Water coming from flooding will make you sick because it is not sea water).</i>
Lindol (Earthquake)	Motion of the Things Around Us	This pertains to how children describe their perspective of earthquakes.	E1	<i>Yung lindol po, gumagalaw po yung ano...lahat po ng ating bahay; kasi po malakas po lindol.</i>
			E2	<i>(The earthquake's intensity can make everything move including our houses.)</i>
			E3	

### ***Children who Experienced Typhoons (Bagyo)***

#### ***i) Heavy Downpour of Rain***

The theme that emerged from the children's perspectives about typhoons is that it is a strong amount of rainfall that can cause destruction of homes. Child T3 said:

*Nasisira ng mga bahay. Kasi ang lakas ng hangin... ang lakas ng ulan. Bumabaha rin yung daanan, tapos nagliliparan ang mga yero.*

*(The houses are destroyed because of the strong wind and rainfall. There is also flooding and zinc metal roofing sheets that are being blown away by the typhoon.)*

Child T1 also mentioned the kind of raindrops that fall during typhoons. He said:

*Umuulan ng malakas. Malakas ang patak.*

(There is a strong downpour of rain which make the raindrops fall heavily.)

On the other hand, Child T2 described that the intensity of typhoons is stronger than that of the rain.

### ***Children who Experienced Flooding (Baha)***

#### ***i) Wavelike Water***

The theme that surrounds the perspectives of children about flooding is the feature that it is similar to the water coming from the sea. Child F1 describes flood as “*alon*” resembling the waves found in the sea. However, Child F2 explains that it is water but not coming from the sea, she said:

*Sasakit kasi hindi yung tubig... sa ano, sa dagat.*

(Water coming from flooding will make you sick because it is not sea water.)

On the other hand, child F3 refers flood as the water coming from the rain, she tells:

*Pag-umuulan bumabaha po yun. Kasi po dahil po sa ulan.*

(There is flooding because of the downpour of rain.)

The researcher asked the flood level they have experienced and Child F1 described that it is usually above her head. When asked what she does when the level of flood is above her, she said:

*Tapos pagpumunpunta ako dun sa swimming hindi ako marunong lumangoy*

*(then laughs).*

(Whenever there is flooding, we need to swim even though I do not know how.)

Nevertheless, when she was asked what comes into her mind during flooding, she replied:

*Ano, lumalangoy. Kailangang lumangoy.*

(I really need to swim whenever there is flooding.)

### ***Children who Experienced Earthquake (Lindol)***

#### ***i) Motion of the Things Around Us***

The children’s perspectives about earthquakes as told by Child E1 is:

*Yung lindol po gumagalaw po yung ano... lahat po ng ating bahay; kasi po malakas po ang lindol.*

(The earthquake’s intensity can make everything move including our houses.)

Likewise, Child E3 describes earthquakes as:

*Gumagalaw, may mga nasisirang bahay.*

(Everything is moving and some houses are being destroyed because of the earthquake.)

Additionally, Child E2 instead of saying the definition, he mentioned what one must do during an earthquake:

*Takbo.*

*Para hindi mabagsakan.*

(We need to run so that we will not be knocked over by the debris.)

### **Children's Preparedness on Disasters and Significant Concepts**

In the study on the Impact of Natural Disasters on Children by Kousky (2016), it is suggested that children can enable themselves to decrease the risk of disasters through disaster education that is suitable to their level. This continuous provision and improvement of disaster preparedness is honed through anticipation and abstract reasoning taught in schools (Hoffmann & Muttarak, 2017). In this regard, the lessons on disaster education can provide preparedness to children even without prior experience on any hazardous event (Johnson, 2014).

#### ***Staying at Home***

Among the nine participants, six of them mentioned that they need to stay at home during disasters. When asked what the participant did during an encountered disaster, Child T2 answered:

*Pumunta sa loob ng bahay. Pumasok ng bahay kasi lumalakas yung ulan.*

(I need to stay inside the house because of the heavy rain.)

When the participant also was asked what she thinks one must do whenever there is flooding, Child F1 said:

*Dapat ano, pumapasok sa loob ng bahay.*

(We should go inside the house whenever there is flooding.)

The same question was also asked during earthquakes, Child E3 said:

*Pumunta sa bahay. Para pag nabagsakan ka ng mga sirang bahay, baka kasi mamatay ka.*

(You should go and stay at home so that you will not be knocked over by the houses that were destroyed by the earthquake or else you might die.)

#### ***Acknowledging Different Feelings during Disasters***

Participants rated their feelings from 1 to 5, one as the lowest and five as the highest. The children's feelings during disasters as expressed in the interviews were feelings of fear, sadness, or shock. Four (4) children out of nine expressed that they felt fear during the event

of disaster they have experienced. When Child T3 was asked what he felt during the typhoon and why, he said:

*Natakot. 'Pag kumikidlat.*  
(I felt scared because of the lightning.)

Child E1 felt scared too, when he was asked to rate his feelings and why, he said:

*One (1) lang, konting takot lang. Malakas po ako eh.*  
*Nandiyan din po kasi si Mommy.*  
(I only felt a little scared, that's why I rated it only one. I think I am brave and because my mommy was with me when the earthquake happened.)

The three (3) of the participants felt sadness during the event of the disaster. As expressed by Child F3, she said:

*Nalulungkot, kasi po wala pong pasok bukas, eh.*  
(I feel sad whenever there is flooding because I know the next day there will be no classes in school.)

Child T1 also expressed that he feels sad too, whenever there is a typhoon for the reason that there will be no classes. When asked to give his rating, he said:

*Five (5). Kasi umuulan pa rin, malungkot pa rin.*  
*Kasi hindi nakalabas ng bahay. Kasi hindi tumitiggil yung ulan.*  
(The rain does not stop from pouring whenever there is a typhoon and I feel sad about it because I cannot go outside.)

One participant said that he felt shocked and happy at the same time. When asked why, he said:

*Nagulat pero masaya. Gumalaw po kasi yung tiyan ko, nakiliti po kasi ako.*  
*One (1) lang po kasi po masaya ako.*  
(I was shocked but I felt happy at the same time because I felt the tingling sensation in my tummy. I would only rate it one because I feel happy.)

One (1) child said that he was scared then shocked because of the aftershocks he felt during the earthquake. Child E2 expressed:

*Nagulat ako tapos noon... kanina, natakot ako.*  
*Konti lang, pero hindi ako natakot ng husto.*  
(I was shocked and I got scared because I felt the aftershocks. Nevertheless, I only got a little scared.)

### ***Helping and Sharing to Others***

The researcher gave a sample situation about their best friend or classmate who was greatly affected by the same disaster that they had experienced. The participants were asked to tell what they think they would do or say if the circumstance will happen. All of the participants shared that they are all willing to help their friend in times of disasters. Child T1 expressed that



he will offer his help. Child T2, T3, F3 and E2 expressed that the form of help that they will give will be through offering their own homes and letting their friend live with them. As Child T2 said:

*Punta tayo sa bahay namin, kasi umuulan ng malakas.*  
(Let's go to our house because it is raining heavily.)

Child T3 told the researcher:

*Tumira na lang po siya sa amin. Sabihan niya na lang sa Mama niya na bilhan siya ng gamit.*  
(I will tell my friend to live with us. He can tell his mother to buy things for him.)

Child F3 also expressed:

*Pumunta na lang doon sa bahay namin tapos papahiram ko ng damit.*  
(You can stay at our house and I will let you borrow some clothes.)

Child E2 also voiced out that he will offer his home to his friend. He said:

*Punta ka sa bahay ko, tapos doon ka matulog, tapos doon ka magpakabait, doon ka mag-pray.*  
(You can stay at our house and sleep there. Our home can be a place where you can be kind and a place where you can pray.)

Likewise, Child F1, E1, and E3 offered their help by telling that they will fix things for their friends. Child F1, said:

*Kukunin ko yung damit niya. Kasi papatuyuin ko.*  
(I will dry her clothes that got wet from the flooding.)

It is also similar with the response of Child E1:

*Tutulungan ko siya ayusin ang bahay. May kotse sila. Aayusin ko yung kotse nila.*  
(I will help in fixing their house. They also have a car, so I will help fix that too.)

Child E3 mentioned to help too by fixing the house of his friend. He said:

*Papagawa ko ng bahay. Yun po.*  
(I will fix their house.)

Two of the participants also mentioned, comforting words in case their friend might be afflicted with the disaster. Child E3 said:

*“Hayaan mo na, mayaman naman kayo diba?”*  
*Eh ‘di papatahanin ko.*  
*“Tumahan ka na, (name of his friend).”*

(Do not worry, you are rich right? (Pertaining to the materials things that were destroyed because of the disaster.)

(I will make him calm down so that he will stop from crying. I will say to him, "Please stop crying and calm down.")

Child F2 also gave her comforting words in case a friend of hers might be afflicted by flooding. She also made mention of the word "*iligtas*", which means "to save". When asked by the researcher on how she is going to save her friend, she responded that when she becomes a hero, she can save her friend. She said:

*"Wag ka mag-alala."*

(Do not worry.)

*Kasi, kasi sasabihin ko kay Mama ko at sa Daddy ko. Iligtas.*

*Kasi ano, nababaha yung bahay niya.*

*Ah, iligtas ko din ang Mama niya at Daddy niya.*

(I will tell my mother and father that I will save my friend because their house is affected by the flooding. I will also save my friend's mother and father.)

### ***Children's Preference for Active Learning***

Children vary in development rates and learn in different ways across learning areas (National Children's Bureau, 2010). Participants mentioned their favorite activities if their teacher was given the opportunity to teach them about disasters. They like to be involved in active learning as they construct their knowledge on disasters. When the children were asked by the researcher on what activities they would like to have if their teacher is going to teach about disasters, their responses would fall into different children's activities. Seven (7) out of nine (9) children suggested more than one activity that they would like to have in learning about disasters. Drawing and watching videos were both mentioned twice, both music and movement and stories were mentioned four times, and games or play were mentioned seven times. Among nine (9) participants, six (6) of them mentioned games as one of the activities they would like to have. Games as some children said, refer to this term as play. Child E3 mentioned:

*Mag-games. Mga laruan tungkol sa lindol.*

(I like to play games and have toys that would teach us about earthquakes.)

Child F3 also said:

*Maglaro. Masaya po sila (referring to her classmates if they will be playing).*

(My classmates and I will be happy when we play.)

As Child E1 suggested in learning about earthquakes he said:

*Yung building tower, yung blocks.*

*Opo, tapos yung nag (swaying his hands horizontally), tapos na ano, nabagsak.*

*Tapos itatayo, tapos babagsak parang yung sa lindol.*

*Mahilig po kasi akong gumawa.*

*Yung katulad sa TV yung Team Yey, sa channel 4. Sumasayaw, tapos kakanta, tapos may games. May arts din. May gagawin.*

(I like to learn more about earthquakes using building blocks where we see its movement. When the blocks fall, we can then can build the blocks again. I really like to do hands-on activities. I like the one that I see on television on channel 4, Team Yey. There's dancing, singing, playing of games, and doing art activities.)

### Children's Preference for Active Learning

One main theme emerged as the children mentioned their favorite activities if their teacher was given the opportunity to teach them about disasters. Children vary in development rates and learn in different ways across learning areas (National Children's Bureau, 2010). When the children were asked by the researcher on what activities they would like to have if their teacher is going to teach about disasters, their responses would fall into different children's activities. Seven (7) out of nine (9) children suggested more than one activity that they would like to have in learning about disasters. Drawing and watching videos were both mentioned twice, both music and movement and stories were mentioned four times, and games or play were mentioned seven times. Among nine (9) participants, six (6) of them mentioned games as one of the activities they would like to have. Games as some children said, refer to this term as play. Child E3 mentioned:

*Mag-games. Mga laruan tungkol sa lindol.*

(I like to play games and have toys that would teach us about earthquakes.)

Child F3 also said:

*Maglaro. Masaya po sila (referring to her classmates if they will be playing).*

(My classmates and I will be happy when we play.)

As Child E1 suggested in learning about earthquakes he said:

*Yung building tower, yung blocks.*

*Opo, tapos yung nag (swaying his hands horizontally), tapos na ano, nabagsak.*

*Tapos itatayo, tapos babagsak parang yung sa lindol.*

*Mahilig po kasi akong gumawa.*

*Yung katulad sa TV yung Team Yey, sa channel 4. Sumasayaw, tapos kakanta, tapos may games. May arts din. May gagawin.*

(I like to learn more about earthquakes using building blocks where we see its movement. When the blocks fall, we can then can build the blocks again. I really like to do hands-on activities. I like the one that I see on television on channel 4, Team Yey. There's dancing, singing, playing of games, and doing art activities.)

It is innate in children to discover and learn through the things around them (Pekdoğan & Kanak, 2016). Children's activities given in school play an important factor that makes their learning meaningful and remarkable. The different children that were interviewed made mention of activities that help them acquire knowledge and skills about disasters. Teaching strategies such as storytelling, singing, dancing, and providing play activities support children's active learning. Involving children in different activities paves way for in-depth learning, making them more involved as they

create links to the prior knowledge that will help them make intelligent decisions (Cambridge Assessment International Education, 2019).

## **DISCUSSION AND IMPLICATIONS**

### **Children's Perspective on Disasters**

The Convention Rights of Children supports the expression of child's voices, thus, giving the importance of their own perspectives in different areas of specialization (Ponizovsky-Bergelson et al., 2019). The perspectives of children towards disasters depends on their exposure and the knowledge they have prior or the hazardous event (Kousky, 2016). The findings of this study shows that children are capable of having their own views and express their feelings on a particular type of disaster. It may be the same or unique from another individual (Maloney & Save the Children, 2014). The impact of disasters confronting Filipino children remains inexorable due to the geographical location of the Philippines (Center for Excellence in Disaster Management & Humanitarian Assistance [CFE-DMHA], 2016) but with preparedness education especially among children can minimize the risks of the harm brought by disasters (Hoffmann & Muttarak, 2017).

### **Children's Emotional Responses to Disasters**

Most Filipinos believe that they are self-sufficient before, during, and after disasters because of their past experiences on calamities (Bollettino et al., 2018). However, children's responses vary due to their own upbringing and the type of disaster they have experienced (Kousky, 2016). Although they may encounter feelings of fear, sadness, or shock, they have exceptional ideas on particular concerns coming from their own environments (Lansdown, 2011).

The children who have expressed that they felt fear, have described it as "slight" fear because of the presence of an adult and through the encouragement they receive from them. Through the interviews, the need to process children's emotions are still needed to be considered because of the significant impact that Kindergarten children are still in the period of developing their physical, cognitive, social, and emotional skills.

### **Children's Involvement in Emergencies**

Children have the capacity to think of others' welfare. They have the ability to take part in emergency readiness (Lopez et al., 2012) and their willingness to be of help in moments of disaster amplifies the belief that children are active agents of change and has valuable contribution in DDR (Hore et al., 2018). Referring to young children's views enables them to be understood by adults and entrust children's individuality (National Children's Bureau, 2010). This calls for potential opportunities in which Kindergarten children can participate more and actively respond by talking about disaster and what they can do for people around them. As one of the five points the children's charter for disaster risk reduction (Children's Charter, 2013) presented, children have the right to send key messages which will help others be more informed thus, protecting them for future risks.

## CONCLUSION

Children's knowledge and feelings on disasters extracted different themes which have answered the research objectives. The themes on perspectives of Filipino Kindergarten children on disasters are: *Heavy Downpour of Rain, Wavelike Water, and Motion of the Things Around Us*. The capability of children to express their perspectives are showcased on how the themes were developed. In this study the children have expressed their plans and action about disasters to the themes about significant concepts that can be taken into consideration when developing lessons for kindergarten about disasters. These are: *Staying at Home, Acknowledging Different Feelings during Disasters, Helping and Sharing to Others, and Children's Preference for Active Learning*. These themes can be a basis on how the lessons on disasters may be crafted together with the activities suited to the level of kindergarten pupils.

## REFERENCES

- Agbon, A. B. D., Anzano, C. G., Sajise, A. J. U., Ramirez, P. J. R., & Zamora, G. J. (2017). Intra-household impacts of climate change hazards and autonomous adaptation: Evidence from Bohol, Philippines. In *WorldFish (ICLARM)-Economy and Environment Program for Southeast Asia (EEPSEA)*. <https://digitalarchive.worldfishcenter.org/handle/20.500.12348/633>
- Aja, S. N., Eze, P. I., Igba, D. I., Igba, E. C., Nwafor, C. C., & Nnamani, S. C. (2017). Using multi-sensory instruction in managing classroom for effective teaching and learning. *International Journal of Applied Engineering Research*, 12(24), 15112–15118.
- Alcayna-Stevens, T. (2015). *Slum socio-ecology: An exploratory characterisation of vulnerability to climate-change related disasters in the urban context* (Issue July). Harvard University.
- Ballesteros, M. M. (2010). Linking poverty and the environment: Evidence from Slums in Philippine Cities. *PIDS Discussion Paper Series*, 2010–33.
- Berse, K. (2017). Climate change from the lens of Malolos children: Perception, impact and adaptation. *Disaster Prevention and Management*, 26(2). <https://doi.org/10.1108/DPM-10-2016-0214>
- Bollettino, V., Alcayna, T., Enriquez, K., & Vinck, P. (2018). *Perceptions of disaster resilience and preparedness in the Philippines* (Issue June).
- Cambridge Assessment International Education. (2019). Active learning. In *Cambridge International* (Issue 0).
- Camua, H., Mallari, J. S., & Browder-Long, E. (2016). "Its our school": Children's views on the use of schools as evacuation centers. Save the Children Philippines. [https://www.savethechildren.org.ph/\\_\\_resources/webdata/file/downloadables/1179\\_SavetheChildren\\_Roll\\_y\\_OneMonthOn-FINAL.pdf](https://www.savethechildren.org.ph/__resources/webdata/file/downloadables/1179_SavetheChildren_Roll_y_OneMonthOn-FINAL.pdf)
- Center for Excellence in Disaster Management & Humanitarian Assistance (CFE-DMHA). (2016). *ASEAN Common Framework for Comprehensive School Safety* (Issue June).
- Center for Excellence in Disaster Management & Humanitarian Assistance (CFE-DMHA). (2018). *Philippines: Disaster Management Reference Handbook*. <http://reliefweb.int/map/chile/chilelocation-map-2013>
- Centre for Research on Epidemiology of Disasters (CRED). (2019). *Natural Disasters 2018*.
- Children's Charter, 1. (2013). [https://www.unicef.org/french/policyanalysis/files/children\\_charter.pdf](https://www.unicef.org/french/policyanalysis/files/children_charter.pdf)
- CNN Philippines. (2019). *Death toll in Luzon quake rises to 8*. <http://cnnphilippines.com/news/2019/4/22/earthquake-Zambales-Metro-Manila-April-22-2019.html>
- Community-Based Monitoring System International Network. (2017). The many faces of poverty. In *De La Salle University Publishing House* (Vol. 8). <https://doi.org/10.1017/CBO9781107415324.004>
- Creswell, J. W. (2014). *Research design* (4th ed.). SAGE Publishing, Inc.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publishing Ltd.
- de la Cruz, G., Mendoza, G., & Manuel, W. (2015). *What dangers await when the West Valley Fault moves?* Rappler. <https://www.rappler.com/move-ph/issues/disasters/knowledge-base/93746-maps-west-valley-fault-earthquake-scenarios>
- Department of Education Philippines - Bureau of Learning Resources (DepEd - BLR). (2017). *Kindergarten teacher's guide*.
- Department of Education Philippines (DepED). (2008). *Disaster risk reduction resource manual*.
- DEPED, D. of E. P. (2015). *School Disaster risk reduction and management manual*. [http://depedbohol.org/v2/wp-content/uploads/2012/06/DRRM-Manual\\_Booklet-1\\_Final-1.pdf](http://depedbohol.org/v2/wp-content/uploads/2012/06/DRRM-Manual_Booklet-1_Final-1.pdf)

- DEPEd, D. of E. P. (2019). *Observance of the 2019 national disaster resilience month DO No. 084 s. 2019*. Early Childhood Care and Development. (2010). *National Early learning framework* (p. 18).
- Fawcett, A. (2012). Climate extreme: How young people can respond to disasters in a changing world. In *Plan International*.
- Global Facility for Disaster Reduction and Recovery (GFDRR). (2019). *GFDRR - Philippines*. Global facility for disaster reduction and recovery. <https://www.gfdr.org/en/philippines>
- Government of the Philippines. (2011). *National Disaster Risk Reduction and Management Plan ( NDRRMP )*. 70. [https://doi.org/https://reliefweb.int/sites/reliefweb.int/files/resources/Signed\\_NDRRMP.pdf](https://doi.org/https://reliefweb.int/sites/reliefweb.int/files/resources/Signed_NDRRMP.pdf)
- Hardman, J. (2017). Guided co-construction in classroom talk. *Discourse and Education, January 2017*. <https://doi.org/10.1007/978-3-319-02243-7>
- Harwood, S., Haynes, K., Bird, D., & Govan, J. (2014). Children 's Perceptions and adaptive behaviours in response to seasonal change and extreme weather in Broome, Western Australia. *Australian Journal of Emergency Management, 29*(January).
- Heintze, H. J., Kirch, L., Kupperts, B., Mann, H., Mischo, F., Mucke, P., Pazdriert, T., Prutz, R., Radtke, K., Strube, F., & Weller, D. (2018). *World risk report 2018 focus: Child protection and children's rights*. <https://doi.org/10.3779/j.issn.1009-3419.2009.09.004>
- Hoffmann, R., & Muttarak, R. (2017). Learn from the past, prepare for the future: Impacts of Education and experience on disaster preparedness in the Philippines and Thailand. *World Development, 96*, 32–51. <https://doi.org/10.1016/j.worlddev.2017.02.016>
- Hore, K., Gaillard, J., Johnston, D., & Ronan, K. (2018). Child-centered risk reduction research-into-action brief: child-centered disaster risk reduction. *Global Alliance for Disaster Risk Reduction & Resilience in the Education Sector*, 1–9.
- Index For Risk Management (INFORM). (2019). *Risk profile form* (Issue 407). [http://www.inform-index.org/Portals/0/Inform/2019/country\\_profiles/PHL.pdf](http://www.inform-index.org/Portals/0/Inform/2019/country_profiles/PHL.pdf)
- Ireland, S. (2016). *Education disrupted: Disaster impacts on education in the Asia Pacific region in 2015*.
- Johnson, V. A. (2014). *Evaluating disaster education programs for children*. Massey University.
- Kafle, S. K. (2017). Disaster risk management systems in South Asia: Natural hazards, vulnerability, disaster risk and legislative and institutional frameworks geography & natural disasters. *Journal of Geography & Natural Disasters, 7*(3). <https://doi.org/10.4172/2167-0587.1000207>
- King, T. A., & Tarrant, R. A. C. (2013). Children's knowledge, cognitions and emotions surrounding natural disasters: An investigation of year 5 students, Wellington, New Zealand. *Australasian Journal of Disaster and Trauma Studies, 2013*(1), 17–26.
- Kousky, C. (2016). Impacts of natural disasters on children. *Future of Children, 26*(1), 73–92. <https://doi.org/10.1353/foc.2016.0004>
- Kubicek, K., Ramirez, M., Limbos, M. A., & Iverson, E. (2008). Knowledge and behaviors of parents in planning for and dealing with emergencies. *Journal of Community Health, 33*(3), 158–168. <https://doi.org/10.1007/s10900-007-9078-0>
- Lansdown, G. (2011). Every child's right to be heard. In *Save the Children UNICEF* (Issue 12). [http://www.unicef.org/files/Every\\_Childs\\_Right\\_to\\_be\\_Heard.pdf](http://www.unicef.org/files/Every_Childs_Right_to_be_Heard.pdf)
- Lawler, J., & United Nations International Children's Emergency Fund (UNICEF). (2011). *Children's Vulnerability to climate change and disaster impacts in East Asia and the Pacific*. [http://www.unicef.org/media/files/Climate\\_Change\\_Regional\\_Report\\_14\\_Nov\\_final.pdf](http://www.unicef.org/media/files/Climate_Change_Regional_Report_14_Nov_final.pdf)
- Lopez, Y., Hayden, J., Cologon, K., & Hadley, F. (2012). Child participation and disaster risk reduction. *International Journal of Early Years Education, 20*(3), 300–309.
- Macblain, S., Dunn, J., & Luke, I. (2017). *Contemporary childhood*. SAGE Publishing Ltd.
- Maloney, M., & Save the Children. (2014). *See me, ask me, hear me: Children's recommendations for recovery three months after Typhoon Haiyan*. [http://www.savethechildren.org.uk/sites/default/files/docs/See\\_me\\_ask\\_me\\_hear\\_me.pdf](http://www.savethechildren.org.uk/sites/default/files/docs/See_me_ask_me_hear_me.pdf)
- Masum, M., & Ali Akbar, M. (2019). The Pacific ring of fire is working as a home country of geothermal resources in the world. *IOP Conference Series: Earth and Environmental Science, 249*(1). <https://doi.org/10.1088/1755-1315/249/1/012020>
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. John Wiley & Sons, Inc.
- Mukherji, P., & Albon, D. (2018). *Research methods in early childhood: An introductory guide* (3rd ed.). SAGE Publishing Ltd.
- Mutch, C. (2013). "Sailing through a river of emotions": Capturing children's earthquake stories. *Disaster Prevention and Management, 22*(5). <https://doi.org/10.1108/DPM-10-2013-0174>
- Nace, T. (2019). Deadly M 6.6 earthquake strikes the Philippines near Mindanao. *Forbes*. <https://www.forbes.com/sites/trevornace/2019/10/29/deadly-m-66-earthquake-strikes-the-philippines-near-mindanao/#a580dae72ecd>
- National Children's Bureau, N. (2010). Let's listen: Young children's voices - profiling and planning to enable

- their participation in children's services. *Young Children's Voices Network*, 123–132.
- National Children's Bureau, N. (2016). *Ready to listen: Why, when and how to involve young children and their families in local decisions about health and wellbeing* (Issue October).  
[https://www.ncb.org.uk/sites/default/files/field/attachment/Ready to listen 2016.pdf](https://www.ncb.org.uk/sites/default/files/field/attachment/Ready%20to%20listen%202016.pdf)
- National Economic and Development Authority (NEDA). (2017). Philippine Development Plan 2017-2022. In *National Economic and Development Authority*. [https://doi.org/10 July 2012](https://doi.org/10.7553/20170712)
- National Economic and Development Authority (NEDA), & United Nations International Children's Emergency Fund (UNICEF). (2018). *Situation analysis of children in the Philippines*.  
<https://www.unicef.org/philippines/UNICEFSituationAnalysisSummary.pdf>
- Nilsson, S., Björkman, B., Almqvist, A. L., Almqvist, L., Björk-Willén, P., Donohue, D., Enskär, K., Granlund, M., Huus, K., & Hvit, S. (2015a). Children's voices-differentiating a child perspective from a child's perspective. *Developmental Neurorehabilitation*, 18(3), 162–168.  
<https://doi.org/10.3109/17518423.2013.801529>
- Nilsson, S., Björkman, B., Almqvist, A. L., Almqvist, L., Björk-Willén, P., Donohue, D., Enskär, K., Granlund, M., Huus, K., & Hvit, S. (2015b). Children's voices-differentiating a child perspective from a child's perspective. *Developmental Neurorehabilitation*, 18(3), 162–168.  
<https://doi.org/10.3109/17518423.2013.801529>
- Nlandu Roger Ngatu, Justina Maria Regina-Estuar, Sakiko Kanbara, John Owen Ilagan, John Noel Victorino, Jhoanna Isla, Megumi Nishikawa, Miho Morosawa, Yoko Nakayama, & Sayumi Nojima. (2015). Rainstorm and flood disasters: Case study of Shelter Management by Manila Municipal DRR (Disaster Risk Reduction) Teams during Tropical Storm "Mario" (Fung Wong) in 2014. *Journal of US-China Medical Science*, 12(2). <https://doi.org/10.17265/1548-6648/2015.02.005>
- Norozi, S. A., & Moen, T. (2016). Childhood as a social construction. *Journal of Educational and Social Research*, 6(2), 37–38. <https://doi.org/10.5901/jesr.2016.v6n2p75>
- Pailoplee, S., & Boonchaluy, N. (2016). Earthquake activities in the Philippines Islands and the adjacent areas. *Geosciences Journal*, 20(6), 877–889. <https://doi.org/10.1007/s12303-016-0017-x>
- Pekdoğan, S., & Kanak, M. (2016). *A qualitative research on active learning practices in pre-school education*. 4(9), 232–239. <https://doi.org/10.11114/jets.v4i9.1713>
- Pellier, A. S., Wells, J. A., Abram, N. K., Gaveau, D., & Meijaard, E. (2014). Through the eyes of children: Perceptions of environmental change in tropical forests. *PLoS ONE*, 9(8).  
<https://doi.org/10.1371/journal.pone.0103005>
- Philippine Atmospheric Geophysical Astronomical Services Administration (PAGASA). (n.d.). *Tropical cyclone information*. <http://bagong.pagasa.dost.gov.ph/climate/tropical-cyclone-information>
- Philippine Institute of Volcanology and Seismology - Department of Science and Technology (PHIVOLCS-DOST). (n.d.). *Destructive earthquakes in the Philippines*.  
<https://www.phivolcs.dost.gov.ph/index.php/earthquake/destructive-earthquake-of-the-philippines/17-earthquake>
- Philippine Institute of Volcanology and Seismology - Department of Science and Technology (PHIVOLCS-DOST). (2019). *Earthquake information*. Phivolcs-Dost.  
<https://www.phivolcs.dost.gov.ph/index.php/earthquake/earthquake-information3>
- Ponizovsky-Bergelson, Y., Dayan, Y., Wahle, N., & Roer-Strier, D. (2019). A qualitative interview with young children: What encourages or inhibits young children's participation? *International Journal of Qualitative Methods*, 18, 1–9. <https://doi.org/10.1177/1609406919840516>
- RA 10157 Kindergarten Education Act, (2012).
- Rosengard, J. K., & Jefferson, T. (2019). Philippines case study: Urban disaster response. *Property Tax Reform in Developing Countries*, 53–84. [https://doi.org/10.1007/978-1-4615-5667-1\\_3](https://doi.org/10.1007/978-1-4615-5667-1_3)
- Rusdy, I., Faustino-Eslava, D. V., Muksin, U., Gallardo-Zafra, R., Aguirre, J. J. C., Bantayan, N. C., Alam, L., & Dakey, S. (2017). Building vulnerability and human loss assessment in different earthquake intensity and time: A case study of the University of the Philippines, Los Baños (UPLB) Campus. *IOP Conference Series: Earth and Environmental Science*, 56(1). <https://doi.org/10.1088/1755-1315/56/1/012006>
- Salazar, L. . (2015). Typhoon Yolanda: The politics of disaster response and management. *Southeast Asian Affairs*, 2015(1), 277–301. <https://doi.org/http://dx.doi.org/10.1108/17506200710779521>
- Sato, T., & Nakasu, T. (2011). 2009 Typhoon Ondoy Flood Disaster In Metro Manila. *Natural Disaster Research Report of the National Research Institute for Earth Science and Disaster Prevention*, March. <https://doi.org/10.13140/RG.2.1.2817.5121>
- Seballos, F., & Tanner, T. (2011). *Enabling Child-Centred Agency in Disaster Risk Reduction Fran Seballos and Thomas Tanner 2011* (Issue July).
- Shaw, R., Takeuchi, Y., Fernandez, G., Walde, A. X., & Caro, A. R. (2010). *Metro Manila City profile climate and disaster resilience*.
- Southeast Asian Ministers of Education Organization Regional Center for Educational Innovation and

- Technology (SEAMEO InnoTech). (2014). *Toolkit for building disaster-resilient school communities in Southeast Asia*.
- Stafford, B., Schonfeld, D., Keselman, L., & Ventevogel, P. (2014). The emotional impact of disaster on children and families. *Pediatric Education on Disasters Manual*.
- Standards and Competencies for five-year-old Filipino children K to 12 basic education curriculum K to 12 kindergarten curriculum guide. (2016). [http://www.deped.gov.ph/wp-content/uploads/2019/01/Kinder-CG\\_0.pdf](http://www.deped.gov.ph/wp-content/uploads/2019/01/Kinder-CG_0.pdf)
- Strobl, E. (2019). The impact of typhoons on economic activity in the Philippines: Evidence from nightlight intensity. *ADB Economics Working Paper Series*, 589.
- Tay-Lim, J., & Lim, S. (2013). Privileging younger children's voices in research: Use of drawings and a co-construction process. *International Journal of Qualitative Methods*, 12(1), 65–83. <https://doi.org/10.1177/160940691301200135>
- The United Nations Office for Disaster Risk Reduction. (2012). *Children's Action for disaster risk reduction: Views from children in Asia*. [http://www.unisdr.org/files/29304\\_bookunisdrfinishweb.pdf](http://www.unisdr.org/files/29304_bookunisdrfinishweb.pdf)
- The World Bank. (2010). *Climate risks and adaptation in Asian Coastal megacities*.
- Thulin, S., & Jonsson, A. (2014). Child perspectives and children's perspectives – A concern for teachers in preschool. *EDUCARE*, 2, 13–37.
- UNICEF. (2012a). *Overview of child rights in development cooperation*.
- UNICEF. (2012b). UN Convention on the Rights of the Child in child friendly language. *Article 40*, 54. <http://www.unicef.org/rightsite/files/uncrcchildfriendlylanguage.pdf>
- UNICEF. (2016). *UNICEF's written submission to the Committee on the Rights of the Child for the Day of General Discussion on 'Children's Rights and the Environment', 23 September 2016* (Issue September).
- UNICEF, & UNISDR, U. N. O. of D. R. R. (2011). *Children and disasters: Building resilience through education*.
- UNISDR. (2017). *Comprehensive school safety*(Issue March).
- United Nations, Economic and Social Commission for Asia and the Pacific, & (UN-ESCAP). (2019). *The disaster riskscape across Asia-Pacific: Pathways for resilience, inclusion and empowerment*. <https://www.unescap.org/publications/asia-pacific-disaster-report-2019>.
- United Nations General Assembly. (1989). Convention on the Rights of the Child, 20 November 1989. *Annual Review of Population Law*, 16(September), 15.
- United Nations International Children's Emergency Fund (UNICEF). (2019). *For every child, every right*.
- United Nations International Strategy for Disaster Reduction (UNISDR). (2009). United Nations International Strategy for Disaster reduction terminology on disaster risk reduction. In *United Nations International Strategy for Disaster Reduction (UNISDR)* (p. 31). <https://doi.org/10.1021/cen-v064n005.p003>
- Varela, L. (2016). Development of a Guidance Model on Personal and Social Competence for Kindergarten Pupils. *The Normal Lights*, 10(2), 65–88. <http://po.pnuresearchportal.org/ejournal/index.php/normallights/article/viewFile/254/155>
- World Bank. (2013). *Getting a grip... On climate change in the Philippines executive report*. <https://doi.org/10.1371/journal.ppat.1005546>
- World Data Info. (n.d.). *Earthquakes in the Philippines since 1950*. <https://www.worlddata.info/asia/philippines/earthquakes.php>