The Philippines is a country that is prone to natural disasters and has suffered from several typhoons, earthquakes, and volcanic eruptions. With children forming a significant percentage of the country’s population, they have become vulnerable to these natural disasters. In particular, after Super Typhoon Haiyan that struck in 2013 and the Leyte earthquake in 2017. While resilience-intervention programs responded after the disasters, there has been little recognition of the role of social networks in improving the resilience of children. This study examined the role of social networks in building the psychosocial resilience of children affected by disasters. From the results of the study, social networks of children provide comfort, motivation, and stability after disasters. Being able to recognize the vital role of their social networks would contribute to an improved programs and interventions designed to promote psychosocial resilience among children. Practical implications of the present study will enhance structures of social support among children in the context of disasters.
teachers, classmates, and peers are considered significant coping assistance (Koplewicz & Cloitre, 2006).

Consequently, social interactions facilitate coping such as helping children to process their emotions through activities like “drawing and theater play” (Prinstein et al. 1996). Prinstein, La Greca, Vernberg, and Silverman (1996) further posited that familial roles and routines being re-played and re-done by both parents and children help create an environment of normalcy within households thereby contributing to the coping of children after disasters. Similarly, distraction, as facilitated by parents through letting kids listen to music or traveling, also offers a very good source to face stressors brought about by disaster (Prinstein et al., 1996). Other disaster studies have also made similar claims that assistance in recovery is largely provided by family members (Beggs et al., 1996). A study conducted about the Cyclone Sidr in the Bangladeshi coast showed that family members provided crucial support during the post-disaster phase. Active relationships and effective care coming from the social networks of the child should be fostered to help children recover from the effects of disasters, and ultimately help in building psychosocial resilience in children (Williams et al., 2008; Prinstein et al., 1996; Sapienza & Masten, 2011).

Given that a disaster entails innumerable negative impacts and abrupt changes, it can be noted that the same disaster does not account for similar reactions among the affected people. Hence, it can be understood that each individual responds differently to a disaster. The difference in the disaster response can be attributed to the individual’s resilience. The notion of resilience can be understood in a social-ecological approach and can be defined as a quality possessed by both the individual and their environment (Ungar, Ghazinour & Richter, 2013). Correspondingly, Ungar (2008) defined resilience as both the capacity of individuals to navigate their way through psychological, social, cultural, and physical resources that sustain their well-being as well as their individual and collective capacity to negotiate for these resources to be provided in a culturally relevant manner.

Many researchers have explored on the concept of resiliency (e.g. Ahmed, 2007; Earovilino-Ramirez, 2007; Peek, 2008; Bonanno, 2010; Norris, Friedman, Watson, Bryne, Diaz, & Kaniasty, 2002; Petrucci, 2012; Ross, 2014; Agaibi & Wilson, 2005; Lawson, 2010; Gowan, Kirk & Sloan, 2014; Bonanno, Galea, Bucciarelli & Vlahov, 2007). However, most of the available researches on resilience tends to focus on examining the general adult population. Because children are a significant portion of the overall population vulnerability to disasters is high. Hence, there is still much to be learned about children’s distinct capacities to adapt in times of disasters. Moreover, there has been little recognition of the role of social networks in improving the resilience of children amidst the various resilience-intervention programs poured in after these disasters. Thus, this study attempts to examine the role of social networks in building the psychosocial resilience of children affected by disasters. The present study aimed to expand and fill in the gap of knowledge of the process of children's resilience.

II. METHODOLOGY

Research Design

This study employs a qualitative research design and utilized an exploratory case study approach to understand the role of social networks in building the psychosocial resilience of children affected by disasters. This type of case study is utilized to investigate and explore phenomena or experiences which have no clear or single set of outcomes (Yin, 2003; Baxter & Jack, 2010). The case study method was selected because this approach can account for the experiences of children who were affected by Typhoon Yolanda and the Leyte Earthquake in 2013 and can look into their social networks as it plays a contributing factor in their resilience. Given that participants have distinctive characteristics; a case study method can elucidate critical information about the phenomenon of interest. This will take into account the complex and unique processes involved in children’s resilience in the context of disaster.

Research Samples

A total of six (6) participants were involved in the study. Participants were chosen based on the following qualifications: (a) Children (9-12 years old); (b) Residents of Tacloban City and Kananga, Leyte; and (c) was affected by Typhoon Yolanda and the Leyte Earthquake last July 6, 2017. The number of participants is small because of the difficulty of accessing disaster-affected children-participants.

The present study chose school-aged children (9-12 years old) because, during this developmental stage, they are characterized to have the capacity to think logically and reason out things and problems. They can consider several possibilities, have a better understanding of a variety of concepts, and are observed to have an improved memory (Lorina, 2015). This is also the stage wherein children can concentrate for a longer period compared to middle childhood (5-7 years old).
Among the participants, two were males and four were females all ranging from ages 9 to 12 years old. Three participants were Typhoon Yolanda survivors and residents of Tacloban City. On the other hand, three participants were from Kananga, Leyte, and experienced the Leyte earthquake last July 6, 2017.

All participants were recruited using purposive or convenient sampling.

**Data Collection Method**

Before the actual conduct of the study, permission letters addressed to the school principals were distributed. Upon the approval of the school principal, data collection started. The first data gathering was conducted at an elementary school in Tacloban City and another at an elementary school in Kananga, Leyte. Before the interviews started, the researchers introduced themselves and stated the reason for the interview and the nature of the study. Settled in a conducive place to conduct the interview, the researchers explained and obtained informed consent, ensuring the privacy, confidentiality, and anonymity of the data.

The first thing done by the researchers was to establish rapport with the participants by introducing themselves and having an energizer. The energizer is the singing of children’s action songs by the authors to reduce the anxiety of the participants.

After this, the researchers stated the nature of the study. For the children to be comfortable in answering the interview questions, the researchers employed a kite activity which was administered in a small group setting. This is an age-appropriate activity that allowed the participants to color, write, and share their sources of help and experiences during and after Super Typhoon Yolanda. The conduct of color-and-draw activity made the participants more at ease and comfortable sharing their experiences.

Questions like how were your experiences during Typhoon Yolanda/2017 Leyte Earthquake? Who helped you during/after the disaster? How did these people help them during those distressing moments? were included in the semi-structured interview. Probing questions were also asked during the interview and it lasted for forty-five (45) minutes. The interview schedule was validated by experienced disaster researchers and their comments were integrated into the questionnaires.

The interview lasted for approximately one hour and thirty minutes. A simple token was given to each participant.

Given the exploratory nature of this study and the need for more in-depth, anthropological or grounded approaches to better understand the relationship of resilience and family support or to link networks to individual resilience in children, this study does not claim to provide those answers.

**Data Analysis**

Thematic analysis was used to analyze the data collected from the interview. The study employed thematic analysis to develop codes of the roles of children-participants’ social networks after disasters. From the participants’ responses, codes were derived. After coding the answer, themes were constructed and categorized. The major conceptual categories were “emotional, cognitive and behavioral responses of children in the context of disaster”, “child’s attributive qualities”, and “post-disaster roles of social networks.” Everything related to the roles of social networks after disasters was coded under this category and then subdivided into two themes: role of family, and role of peers and teachers. Sub-themes were developed under these two major themes to discuss intensively the roles of the mentioned social networks. These themes were examined and discussed based on the framework of socio ecological approach of resilience. These data then formed the basis for the structure of the findings of this study.

**Ethical Consideration**

Parental consent was secured for all the participants. Children’s assents were also obtained before the interview. Participants were informed of their right to withdraw when it so happens that they do not feel comfortable answering the interview questions. Furthermore, the confidentiality of all information disclosed by the participants was also ensured. After the interview, all the participants were debriefed and given a simple token.

**III. RESULTS AND DISCUSSION**

**Emotional, Cognitive and Behavioral Responses of Children in the Context of Disaster**

Children are considered vulnerable and at-risk before, during, and after a disaster. Frequently, they are portrayed as helpless, powerless, and passive. The perception of their vulnerability is rooted in their lack of independence and their reliance on their parents or caregivers in decision-making. Their vulnerability may also be viewed due to their less capacity to deal with the world and their high
dependence upon others for their well-being. Children are reliant on their parents or guardians’ in providing them with their necessary resources (food, shelter, and clothing) as well as their safety and security.

In the context of disaster, it is commonly viewed that children show only some minimal reactions. However, the present study indicated otherwise. Based on the gathered data, various responses were experienced by the participants during and immediately after the disaster (Super Typhoon Yolanda). These responses can be classified based on cognitive, emotional, and behavioral responses (Table 1).

Table 1
Various responses of children before, during, and after a disaster

<table>
<thead>
<tr>
<th>Domain</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive</strong></td>
<td>Worrying about safety</td>
</tr>
<tr>
<td><strong>Emotional</strong></td>
<td>Fear</td>
</tr>
<tr>
<td><strong>Behavioral</strong></td>
<td>Flight/Run</td>
</tr>
</tbody>
</table>

Based on information gathered from the participants, fear and panic were common emotional responses. These have been reported as common disaster reactions due to increasing concern of safety and security (Silverman and La Greca, 2002). The concern on safety and security is a result of the fear of separation from parents or loved ones. During the interview of the participants, one relayed his worry for their family’s safety during Super Typhoon Yolanda.

“...ginyaknan ko hi Mama nga mag-evacuate kami ha EVSU kay bangin magbaha ngan maruba it am balay.”

[I told my mother to evacuate to a safer place because of the possibility of flood and damage to their house.]

As can be observed, for children, a secure place, such as their home bolsters their sense of safety and protection. Displacement, destruction, and/or loss of their house heightens their vulnerability and fear.

“...worried...kay bangin maguba an amon house.”

[I was worried because it might destroy our house]

“...very scared ko sa Yolanda uy...kay natanggal ang atop nina Mama.”

[I was scared during Yolanda...because my mother’s roof got blown away]

Differences in behavioral and cognitive responses among the participants were also noted. For instance, one participant manifested her fear by crying and immediately seeking an open and safe place.

These emotional, cognitive, and behavioral responses exhibited by the participants are considered normal reactions to a stressful event like a disaster. It can also be observed that these responses were exhibited by the participants temporarily. Based on the participants’ responses and behavior, their immediate and after disaster reaction does not lead to any serious and chronic psychological concern. This could be attributed to children’s protective factors and qualities which include their attributive characteristics and the presence of a social network.

Child’s Attributive Qualities

One significant contribution to the development of children’s psychosocial resilience after a disaster is their traits and resources. The participants see themselves as obedient, respectful, kind, and helpful as they help in doing household chores, having positive dispositions in life as well as being brave and good. Accordingly, one participant mentioned that he is helpful as he rescued a friend in need.

“...rescuer...friendly...if may nahuhulog ako irescue daw...”

[...rescuer...friendly...If someone fell, I rescue him/her.]
Significantly, the spirituality of the children was exhibited during and after the disaster. God is also seen as a constant source of help. One participant recalled how hard she prayed for their safety. This particular child claimed she was seeking help from God to help her and her family to be safe.

“...nagpray ‘ko kan God para kami tabangan.”
[I prayed to God to help us]

Likewise, the role of a social network, which is composed of the child’s parents and caregivers during a disaster, are seen as vital because they are the ones whom the child is familiar with and can respond to children’s various needs (physiological and safety needs).

**Post-disaster roles of social networks**

**Social Network of Children**

Social network and social capital are divided into three namely: bonding social capital, which refers to connection within the communities built by similarities and common characteristics; bridging social capital that refers to connections built through professional or social organizations; and linking social capital, or the connections between individuals in a community and authorities (Aldrich and Meyer, 2014). The most commonly used and available social capital is the bonding social capital as it can easily be accessed in different situations, especially in natural disasters.

Researches in disasters have long recognized that the social networks of individuals are essential in everyday lives including the aftermath of disasters. In this matter, the social networks of children are composed specifically of their parents, friends, and teachers although parents and friends are the personalities that children frequently turn to after disasters (Prinstein et. al., 1996). Accordingly, the participants of this study have included parents, peers (neighbors and classmates), and teachers as part of their social networks (Figure 1).

“Mga nagbibigay ng happy face sa akin... classmates, my family, teacher, and friends.”
[People] who show me happiness through their faces... classmates, my family, teacher, and friends.]

“...mother, my family, my teacher, my father...”

The people hereto are considered significant in the recovery of children in the aftermath of disasters because of the coping assistance they make available for them. “Coping assistance” as termed by Prinstein et al. (1996) refers to “actions taken by significant others that help children cope with stressful events-in this instance, a major natural disaster.” Thoits (1986) also emphasized that such social networks are effective in the sense that they offer consistent support and physical reassurance.

**Figure 1**

*Social Network of the Child in the Context of Disaster*

*Note: In the context of disaster, children are surrounded by different social networks important in building resilience such as parents and other family members, peers, and teachers.*

**The Role of Family**

Parents and other family members provide psychosocial and emotional stability towards children. Reassuring support systems allows children to give a sense of security and safekeeping in times of stressful situations like Typhoon Haiyan.

Family ties are the ones who provide immediate assistance to family members after disasters (Betsy Garrison and Sasser, 2009; Hurlbert et al., 2001). Given that the sense of normalcy has been disrupted after a disaster, children tend to seek sources from which he or she can draw comfort and security to bring back their sense of normalcy. This is in support of the study conducted by Reiss (1980) in which it emphasized the presence of social support as a means by which the child can meet new demands and cope with difficulties thereby ensuring security and safety (as cited from Măirean & Turliuc, 2011). Developmentally speaking, the child is not yet equipped with complex problem-solving skills to be able to handle the situation on their own. In this manner, parents’ tendency to take over their children’s lives is reinforced (Pfefferbaum and North, 2008). The family will be one of the children’s most significant sources of strength after disaster since they are directly interacting with the child.
**Protective Role of Family**

Disasters have been shown to result in the loss of normal opportunities for coping and social support (Ronan et al., 2008). Children as well as adults typically recover with time and support from traumatic events and without clinical intervention (Chemtob, Nakashima, and Hamada, 2002; Norris et al., 2002; Speer, 2000). As has been shown, in terms of either increasing vulnerability or shielding children from deleterious psychological effects, the role of parents cannot be underestimated following a disaster (Ronan et al., 2008; Pfefferbaum and North, 2008; Norris et al., 2002). In other words, while distressed parents can increase the vulnerability of a child, protective and supportive parents who are able to provide their child with comfort, encouragement, stability, predictability, and a 'coping model' would reduce their child’s vulnerability (Ronan et al., 2008). For instance, one participant of this study mentioned that,

“We ko’y mahadlok kay naa ang akong Mama.”
[I was not scared because I am with my mother.]

Parents and the overall family atmosphere can readily provide the support that the child needs to facilitate psychosocial resilience along with a more positive relationship between the parent and child (Cobham et al., 2016). These needs may range from physiological, psychological, emotional, and moral (Gottlieb, 1983 as cited from Armstrong, Birmie-Lefcovich, and Unger, 2005). Factors that contribute to resilience are not just supportive individuals but also an environment that includes a family who help make resources available to build and foster psychosocial resilience among children (Osofsky and Osofsky, 2017). As one participant claimed,

“...ang nagtahabang sa akoa kay hi God and ang akong family...”
[God and my family helped me.]

In times of disaster, such as Typhoon Haiyan, children turn to their parents or other family members to provide the resources that they need to overcome the distressing situation. It can be observed, however, that children-participant did not receive emotional processing from their family. Parents and/ or elderly parents are not used to sharing emotions and reactions related to the disaster experience to children. This could be the way in which family members protect their children by keeping them from emotionally disturbing stimuli that may cause distress to children since the reaction of a parent to a catastrophe predicts the reactions of children (Ronan et al., 2008; Norris et al., 2002). Ronan and colleagues (2008) found that when children perceive their parents to be concerned about a dangerous incident and perceive distressing talk at home decreased the children’s coping capacity related to the post-hazard event. Disaster-related suffering of parents is perhaps the most important risk factor for children.

**Families Assisting Child to Safety and Normalcy**

It is necessary to restore a sense of safety and normalcy in the aftermath of a catastrophe. The sensitive care of parents and other caregivers and the basic activities of everyday life in the family can provide essential safety and a sense of normalcy for children (Masten and Motti-Stefanidi, 2020). It is important to restore children’s hope and avenues of opportunity, as well as their school patterns or social life. Children-participants mentioned that their parents made, and continue, to make them happy by playing with them, cooking for them, and traveling with them. In this sense, family members tend to assist children in a form of distraction and provide a sense of normalcy,

“Kahit nasa bahay lang kami pinapasaya kami ni Tatay at Nanay. “Yung Tatay ko sumasayaw...”
[Even if we only stay at home, Mother and Father make us happy. My father dances.]

Furthermore, parents and grandparents alike would cook food for the children:

“Nagluto sila [lolo and lola] ug pagkain...cookies ug cake”
[They [my grandparents] baked food...cookies and cake]

Another participant referred to Cebu being “daghang ang place” (many places [to visit]) as one of his sources of strength. He even cited Lapu-Lapu City and Mandaue City as one of his favorite places to visit. Interestingly, when parents engage children to participate in activities such as traveling to new locations, they are distracted from the impact of natural disasters (Koplewicz and Cloitre, 2006; Prinstein et al., 199).

For children in post-disaster situations, parents are often a significant source of support. In a variety of ways, parents can assist their children to safety and normalcy. They may minimize the exposure of children to secondary adversities, enable children to process the traumatic experience, restore regular activities (e.g. traveling), redirect children to more constructive efforts from distracting thoughts and emotion (e.g. dancing and cooking), and restrict the exposure of children to media attention and
encourage their processing of this material (Pfefferbaum and North, 2008).

Suffice to say, the family still functions in the aftermath of natural disasters. This is consistent with the study of Prinstein et al. (1996) of 506 third through fifth graders after Hurricane Andrew that coping assistance, particularly distraction, coming from parents is essential in the recovery of the child after a disaster and ultimately resilience. Consequently, as Koplewicz & Cloitre (2006) posited, families that continually communicate with their children make them feel supported, assured, and comforted. Thus, helping the child to adjust to changes after a disaster. On the one hand, children who can openly discuss their fears and concerns with their family members have also proved to be significant for the child to cope with disasters (Cobham et al., 2016; Koplewicz & Cloitre, 2006; Prinstein et. al., 1996) while parental counseling related to positive reframing, emotional expression, and acceptance was correlated with lower post-disaster adolescent anxiety (Gil-Rivas et. al., 2007).

The Role of Peers and Teachers

Schools provide an important community atmosphere to foster resilience in children following disasters. The school is also a trusted setting that offers an opportunity to develop familiar and required routines among children especially when they are with teachers, peers, and others known to them (Masten and Narayan, 2012). After experiencing disaster trauma that frequently involves disaster-related risk factors such as separation from caregivers, relocation, loss of social support, infrastructure failures, economic difficulties, and increased family stress, returning to school offers the opportunity to begin to build a "new normal" for children (Osofsky and Osofsky, 2018).

The school can at least temporarily become a significant and caring meeting place for the community in communities following disasters, which can be particularly beneficial for children. While education is the primary mission of schools, schools are critical in addressing issues related to safety, family problems, and other negative factors that affect children and adolescents after disasters. Following disasters, schools often need to meet more of the needs of their students outside schooling, including either offering care or referring services to a child (Osofsky and Osofsky, 2018).

Supportive Role of Peers

Friends and classmates were also seen as constant support for the participants. They offer company and serve as their playmates. Children-participants described that by playing and laughing together, their peers developed their resilience through social interactions and the establishment of emotional bonds with them.

"Palagi silang [mga kaklase] nagpapatawa." [They (classmates) always make us laugh.]

"Palagi silang [mga kaibigan] nakikipaglaro ‘pag wala akong kalaro...takbu...takbohan at nagbabike.” [They [friends] always play with me if I have no playmate...running around and cycling.]

Teachers as Trusted Figures

Teachers play a very important role not only in teaching, but also in providing help when needed, because they have come to know the overall needs of the children (Osofsky and Osofsky, 2018). They also play a very meaningful role as primary agents in schools as they offer an opportunity to promote self-efficacy in children and adolescents following disasters. In a child's life, teachers are considered trustworthy figures and can play an important role in providing a sense of normalcy and stability. Teachers play an important role in documenting and encouraging the recovery of their students and can help recognize trauma survivors who may suffer from trauma symptoms but are unable to seek help through communicating with them (Brocque et. al., 2016). As schools are considered the second home of children, a participant of this study considered her teacher as someone she can talk to:

"Kasi si Teacher masaya siyang kausap at masaya din magturo.” [Because it is nice to talk with Teacher and the way she teaches is fun.]

Teachers are in a unique position to monitor children's responses in their treatment and restore routines. In regaining a sense of normalcy and post trauma control, routines are significant. While children see teachers as affable and trusted figures, teachers address events with children, highlight opportunities to improve social support (e.g family, friends, and community), and create ways to promote the development of effective coping strategies for children and adolescents (Brocque et. al., 2016).
[They [classmates] would let us borrow eraser and sharpener. They would give us paper]

A significant factor that influences the psychosocial resilience of children is their availability and connection to their mates, as they prefer to participate with their peers in social activities (Mohammadinia et al., 2018). The findings of other research also indicate that friends influence adolescents' personal and psychological characteristics, encourage their social adaptation (Sallquist, DiDonato, Hanish, Martin, and Fabes, 2012) and foster their health and well-being (Gross-Manos, 2014). Mohammadinia and colleagues (2018) found that resilient children have good communication skills and can be a great help to themselves and others in disaster situations through proper interactions such as playing. Through proper coordination, they can also team up with peers and help older people and younger children who have been affected by the disaster.

Notably, children can benefit greatly from familiar people outside their immediate family such as teachers, classmates, and friends, for support and reassurance for these are the people that they can turn to and talk with especially when they are not at home (Koplewicz and Cloitre, 2006; Prinstein et. al., 1996). This is consistent with the study of Măirean and Turluc (2011) wherein it has been found out that having a good relationship with peers as well as with caring teachers helps the child to demonstrate more resilient characteristics. Furthermore, in the absence of supportive conditions in the home environment, the school is considered the next resource that should be available for children in need (Mampane and Bouwer, 2011; as cited from Măirean and Turluc, 2011).

The family, including the school and its supporting function, have a major effect on fostering the resilience of children. In other words, social support such as family, peers, teachers, and the school climate have been confirmed as factors that influence the resilience of children (Dray et al., 2015; Hunter, 2001; Tiet et al., 1998). The embeddedness of the child in the family, peers, and teachers shows how dependent a child is on his/her social support system. This is especially true in a collectivist culture that is highly interwoven in networks of social support. The importance of social support is even more emphasized in the Philippine setting which is collectivist. It should be taken into account that in this kind of culture, relationships are important.

IV. CONCLUSION

Social networks of children provide comfort, motivation, and stability after disasters. Being able to recognize the vital role of their social networks would contribute to an improved programs and interventions designed to promote psychosocial resilience among children. Resiliency programs and interventions that allow reconnection or re-establishment of social support networks among children affected by a disaster can be implemented. These kinds of interventions promote children's psychosocial resiliency and this manner allows parents and significant others the importance of emotional and physical availability to their children especially in times of disaster.

Our findings have implications for the government, nongovernmental organizations (NGOs), and humanitarian agencies because they often do not take into account children-how they cope with disasters, how they utilize their ties, and their inherent characteristics in the aftermath of natural disasters-as a factor in improving resilience-intervention programs in the future so as not to overestimate the self-recovery efforts of the children.

Future researches can explore and investigate the viewpoint of family members, peers, and teachers as to how they provide support and assistance to a child survivor in the context of disaster. This will be complementary research as it will extend the understanding of their role in fostering children's psychosocial resiliency during and after a disaster. Second, a possible investigation for other active qualities of the social network that contribute to children's psychosocial resilience is suggested.

Lastly, possible researches can explore the subjective understanding of resilience. It can be noted that most theories on resilience are Western and it is recommended to conceptualize the concept of resilience in the Philippine setting.

ACKNOWLEDGEMENT

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REFERENCES


APPENDIX

Note: The kite activity the children-participant did before the interview