



## **Psychological Impact of Disasters on Children in Fiji**

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### **Abstract**

The purpose of this paper is to fill in the void in the existing literature and investigate experiences children encounter during a natural which factors impact psychological aptitudes in their learning and the key solutions to be utilized to successfully address the impact natural disasters have on children. Any form of disaster whether physical, psychological, emotional or sexual is a dreadful harrowing experience for a child. Living and reliving through a natural disaster has lasting memorable impact for children. Category 5 Tropical Cyclone Winston made landfall on Fiji in February 2016 which ravaged the Northern, Eastern and Western parts of the Fiji islands. The experience of terror that children faced during the height of the severe TC Winston has been etched deep in their hearts. Considering children's mental, emotional and psychological stability their coping methods in relation to adults is very slow and fragile. To understand children coping method and strategies needs discourse. The study implemented mixed method utilizing the Hutte-Hennik qualitative research cycle to collate data through semi structured interviews which comprised of open and close end questions. A five point Likert scale was used using 5 (strongly agree), 1 (strongly disagree) to assemble better-quality of the psychological impact of disasters on children in Fiji.

### **Introduction**

Globally, children make up 50% to 60% of those killed or directly affected in disasters and this crisis also disproportionately impact upon the rights of children and women. According to findings by the Fiji Alliance for Mental Health, trauma counseling for children is the biggest need in areas that have been affected by the TC Winston. The children living in the areas that were ravaged by the cyclone were the most vulnerable to mental trauma. Similarly, after the Katrina, also a Category 5 and one of the largest and extremely powerful, costliest and deadly tropical cyclones in the history of the United States, the rate of diagnosable mental health problems increased by 9% and affected everyone.

It was reported by the National Disaster Management Office that the destruction caused by *TC Winston* spanned livestock, crops, forestry, infrastructure, houses and other buildings and 3360 houses were destroyed and 5846 were partly damaged. In addition, 43 lives were lost. (Gounder, 2016).

Initially after a major event such as this Tropical Cyclone Winston and any other natural disaster for the matter, many people particularly children experience distress, including anxiety, distressing memories, sleep disturbance, nightmares and restlessness. This is common and leads to stress related sicknesses and behavior. When people are able to understand that the threat of the cyclone is over, they often get over the early anguish. People are able to only adapt psychologically and recover after months have passed since the cyclone hit them. On the other hand, there are small groups that continue to have unrelenting troubles.

For example, a study that was conducted after Hurricane Katrina, there was an increase in mental problems in New Orleans. People stressed more because their resources were worn down and there were delays in rebuilding, community recovery and the ongoing financial strain.

Succession plans need to be mapped to ensure treatment for those suffering from Post Winston Trauma. Non-governmental organizations have been looked upon to provide the necessary counseling services to children after the cyclone. The extent of the impact on the children cannot be diagnosed without trained people on the forefront of move. It is upon this that we wish to investigate the psychological impacts of TC Winston and Zena on the lives of the innocent children. From this data and analysis, we are focused to write journal articles that will assist the Ministry and organizations of the extent of the impact and identify workable methods to normalize the life of the traumatized child.

### **Research Proposal Questions**

As the field work began, the research questions were refined to focus upon:

- a) Which factors impact psychological aptitude in students learning during a natural disaster?
- b) Which key solutions will be employed to successfully address the psychological impact of the disaster on children?

### **Literature Review**

There is rarely any literature in Fiji on the psychological impacts of natural disasters on children. Time and again we have relied on non-governmental organizations to provide updated information of natural disasters and its impacts particularly on children. Women and children are mostly affected by cyclone

which had implications in several areas of support including shelter, protection, security, education and health. Children are the ones mostly feeling constantly unsafe and insecure during disasters. (Hellmich, 2013)

Hassanian (2006) highlights the traumatic experiences children encounter in the wake of a natural disaster. “Cyclone Winston had rendered tens of thousands homeless whereby 350, 000 people (40% of the nation’s population) were either moderately or severely affected by the storm including 120,000 children” (Gounder, 2016).

According to Villines (2013), when a natural disaster such as a hurricane or a storm strikes, a sense of security goes out the window. This is because the home is a place that people have spent their entire life in, they regard this as their safety net. Upon surviving from these events, they *experience nightmares, anxiety, extreme concerns about storm safety, or obsessive preparation to avoid the next disaster.*

The emotional consequences of disaster can manifest immediately or long after the event. It is therefore critical to understand prior responses and recovery efforts in relation to the natural disaster encountered. Thoughtful consideration rendered to children within affected communities suffering from physical injury psychological and emotional stress issues needs to be considered (Babbel, 2010). Initial studies have shown how the response efforts and expectations of the general public often are misguided and children are left in a lurch in this regard (Babbel, 2010).

The aftermath of a storm or any natural disaster is extreme stress which if it continues for months leads to posttraumatic stress disorder. This form of stress affects the person’s capacity to manage their feelings, leading to fuming weeping moments, terror hits, and relentless escaping of things that remind of the hurricane, nervousness and despair.

It is in this regard that this research intends to assist the Fiji ministry of Education to train and recognize how early responses to psychological, physical, and emotional well being of learners minimize the long term impact.

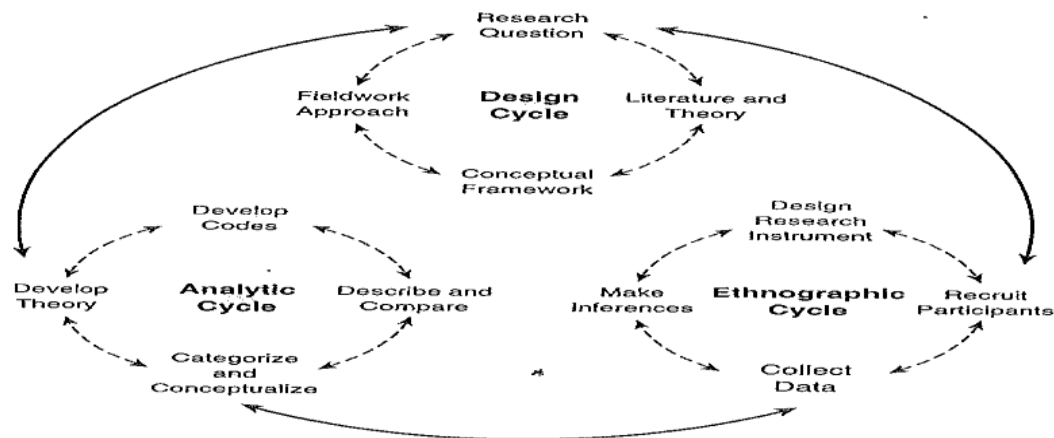
## **Research Methodology**

### **Research method**

This section discusses the research methods and procedures that were developed in addressing the research questions. It outlines the details of the research designs, sample size, study population and

data collection process. Outlining the proposed theoretical framework of this research, this aids in making the necessary methodological choices and constructing the appropriate research design.

**Figure 1.1 Hutter-Hennink Qualitative Research Cycle**



**Hennink, M. et al: 2011**

### **Research Design**

This research was implemented using a mixed method design (Creswell, 2012) “with the intention of incorporating qualitative and quantitative research methods in the data collection and analysis”. The use of “mixed method designs are considered appropriate in a study when the use of a single type of research is unable to adequately address the research questions”. Qualitative data will be collected through the use of semi-structured interviews (Creswell, J., & Plano Clark, V, 2010) “which uses a mixture of both open ended and closed questions”. See table 1 for questions

### **Area and Study Population**

Fiji is located in the South Pacific Ocean. There are 332 in the Fiji Islands. There are 110 islands inhabited by the Fiji people. This study sought to understand which factors impact psychological aptitude in students learning during a natural disaster, and which key solutions will be employed to successfully address the psychological impact of the disaster on children. It was given to tertiary students in the western division after the impact of Cyclone Winston.

Table 1. Shows study construct and variables of each component relating to the physical, social, financial and emotional implications of the cyclone.

|     | Questions   | SA | A | U | D | SD |
|-----|---|----|---|---|---|----|
| 1.  | Did not cause any damage to our house   |    |   |   |   |    |
| 2.  | Partially destroyed our home  |    |   |   |   |    |
| 3.  | Completely destroyed our house  |    |   |   |   |    |
| 4.  | Damaged most of our house hold items  |    |   |   |   |    |
| 5.  | Damaged my books and study materials  |    |   |   |   |    |
| 6.  | Destroyed all food crops in our gardens   |    |   |   |   |    |
| 7.  | Left us with electricity to date  |    |   |   |   |    |
| 8.  | Left us without electricity but we have electricity now                         |    |   |   |   |    |
| 9.  | Left us without water supply  |    |   |   |   |    |
| 10. | Has affected me emotionally as I have lost most of my belongings                |    |   |   |   |    |
| 11. | Has affected my parents financially as we depend on cash crops                  |    |   |   |   |    |
| 12. | Has not affected me in any way  |    |   |   |   |    |
| 13. | Has destroyed the school I study in   |    |   |   |   |    |
| 14. | Made me feel frightened as i had not experienced such strong cyclone in my life |    |   |   |   |    |
| 15. | I have experienced a similar cyclone before                                     |    |   |   |   |    |

## Data Collection

Structured questionnaires were distributed to students and semi-structured interviews were conducted after the first six months of the cyclone impact. The questionnaire inclusive questions were used for data collection which covered an array of questions centred on which factors impact psychological aptitude in students learning during a natural disaster and which key solutions will be employed to successfully address the psychological impact of the disaster on children.

## Discussion

| Questions   | SA | A  | U | D  | SD | Total |
|---|----|----|---|----|----|-------|
| Did Not Cause Any Damages To our House                  | 7  | 6  | 0 | 12 | 49 | 74    |
| Partially Destroyed                                     | 44 | 21 | 0 | 5  | 4  | 74    |
| Completely Destroyed                                    | 43 | 22 | 0 | 6  | 3  | 74    |
| Damaged Most Of H/Hold Items                            | 44 | 10 | 1 | 15 | 4  | 74    |
| Damaged My Books And Study Materials                    | 53 | 8  | 1 | 7  | 5  | 74    |
| Destroyed All Food Crops                                | 42 | 19 | 0 | 8  | 5  | 74    |
| Left Us Without Electricity To Date                     | 47 | 16 | 1 | 4  | 6  | 74    |
| Left Us Without Electricity But We Have Electricity Now | 51 | 14 | 1 | 5  | 3  | 74    |
| Left Us Without Water Supply                            | 51 | 21 | 0 | 1  | 1  | 74    |
| Has Affected Me Emotionally                             | 46 | 13 | 1 | 9  | 5  | 74    |
| Has Affected My Parents Financially                     | 50 | 8  | 2 | 8  | 6  | 74    |
| Has Not Affected Me In Any Way                          | 2  | 3  | 2 | 11 | 56 | 74    |
| Has Destroyed The School I Study In                     | 43 | 10 | 4 | 11 | 6  | 74    |
| Made Me Feel Frightened                                 | 31 | 29 | 1 | 10 | 3  | 74    |

### Question 1 –TC Winston did not cause any damages to your house?

Many of the participants did not agree with this question as TC Winston caused a lot of damages to their houses and their plantations and crops. They were left without almost all or most of their belongings. 49% strongly disagreed, 12% disagreed with the statement. For the 7% that strongly agreed and 6% that agreed, they resided in the urban centers of the Western Division that was also affected by TC Winston but the impact was not as tremendous as that of those participants who resided along the Kings Road. This Category 5 monstrous tropical cyclone was the strongest of its kind on record in Fiji and in the Southern Hemisphere. The damages of TC Winston on the lives of the people and their properties were massive.

### **Question 2 – Partially Destroyed**

Majority of the participants agreed with the statement which comprised of 44% who strongly agreed and 21% who agreed. Those who disagreed with constituted of 5% and 7% of the participants lived in houses that were made of concrete but they managed to secure their houses before the cyclone struck. As a result, they managed to save some of their household items.

### **Question 3 – Completely Destroyed**

44% of the participants who responded to this question had strongly agreed that TC Winston completely damaged their houses. They were left with only the foundation of their house at the end of the cyclone. Within just minutes when the cyclone struck, the roof of their houses flew off, leaving them all wet and cold and then later, the walls of the house fell down and were blown off by the strong winds. In addition to the cause of the damages were the downed power lines and trees that hit their homes. 21% agreed that their houses were completely destroyed leaving them wet and homeless as they tried to move to other houses in the village of settlement. Those who disagreed which comprised of 6% and 3%, they resided in the urban areas. As a result of this destruction, tens of thousands of people had to live in evacuation centers. Many of the villagers lived in either tin or wooden houses with a few concrete houses however, these were all damaged. The participants whose houses were made of bamboo moved to hide in stronger houses but because of the intensity of the winds as they just got stronger and stronger, they decided to move to the school building that was close to the village.

### **Question 4 - Damaged most of the Household Items**

The damages caused by TC Winston were widespread and many homes were destroyed completely leaving them with none or only some of their household items. Strong winds and heavy rains caused the damages as rain water flooded into their homes and the strong winds uprooted the roofs of their houses that destroyed their household items.

44% of the participants strongly agreed to the damages caused to their household items as their homes were blown to pieces and 10% also agreed while 19% disagreed as their roofs were not blown off by the strong winds as they had secured their homes once warnings started coming on the media. A participant from one of the islands that was also damaged during the cyclone related her experience that night as she saw her house collapse. She was so scared but she managed to fetch her siblings and run out of the

house. They ran from house to house four times. She shared how she felt heartbroken to see the home she was born and brought up in, completely damaged. There were a lot of memories in her house but after TC Winston the terror experienced that night had wiped away all those good memories. The children were the most vulnerable during this disaster.

### **Question 5 – Destroyed my books and study materials**

With the destruction caused to the participants' homes and their household items, children also were left without their books and study materials which got blown away with parts of their homes or got wet from the rain water that rushed into their homes. Almost all of the participants strongly agreed that there were damages to their books, and this constituted of 53% of the participants who completed the questionnaire. The participants had not only lost a hope but they also lost hope in their studies. One of the participants relayed how he really felt hurt seeing his parents trying to get a roof over their head in the next few days after TC Winston. He could already imagine what they would have to sacrifice to get back into school and continue studies without a home and a source of income as their plantations were completely destroyed leaving them with nothing. They had to resort to making do and appreciating the donations that flooded in after the cyclone. However, those who resided in towns did not have much damage to their study materials because their homes were not completely damaged.

### **Question 6 – Destroyed all Food Crops**

The damages caused by Winston were devastating and the impact on agriculture in terms of the crops and the populations' ability to plant and ability to earn an income was affected. 42% of the participants agreed that there were damages to all their food crops. Not only did they tear down trees, crops in the ground were uprooted as well. Harvests and those ready to be harvested were all destroyed. The participants lost hope and they were forced to move into evacuation centers for safety reasons. They were also provided with food rations which assisted them during these tough times. However, the pain left after Winston is one that could not be erased as it was tormenting.

### **Question 7 – Left us without electricity**

Power lines were broken and debris scattered along the roads in the towns and cities. 47% of the participants were left without electricity for the longest time and they had to make do with sitting around at night in the dark and just trying to console each other. The Fiji Electricity Authority worked tirelessly into the nights to try and enable electricity



along the affected areas. It was a difficult task as the damages were just too much because in addition to the power lines being damaged, the poles were rooted from the ground by the strong winds. Most of the schools had opened but did not have electricity however the teacher tried to work hard to not only teach but also try and divert the students' attention from the tormenting experiences they were faced with. Most of the roads were blocked from the trees that fell during the cyclone. The power and phone lines were cut as a result aid organizations could not contact those that resided in the worst affected areas of Viti Levu and Vanua Levu.

### **Question 8 - Left us without water supply**

Tropical Cyclone Winston forced villagers to bath in the rivers as there were water cuts for months. It was dangerous to drink water from taps or from rivers which were contaminated by dead animals and also debris and other contaminations.

They had to boil all drinking water as there was a high chance of getting sick from the water course. 51% of the participants strongly agreed that this monstrous cyclone left them without proper drinking water.

### **Question 9 – Had affected me emotionally and made me frightened**

Children were the most vulnerable during TC Winston and even after. 46% of the participants strongly agreed to the impact of the cyclone on them emotionally. One of the participants shared her experience on the night of the cyclone when she tried to stay strong for her little brother and sister who were scared throughout the night. She looked for comfort from her parents but they too were trying to help the elderly family members to safe ground. She played the role of a mother, a father and a sister. Some of the participants found it very difficult to sleep at night and they had dreams that woke them in the nights and leaving them screaming on the top of their voices. When they had to return to school, they could not. Another of the participants relayed how she just wanted to stay with her parents and siblings in case another of the similar disaster would hit them.

There was a lot of fear amongst the children and those that participated in this survey. It took them a while to get over the fear. More fear arose when some of the participants loved ones died during or after the cyclone. The physical and mental scars that were left with those that were affected during the cyclone will be felt for a long time. One of the participants stated that everyone was affected even the youngest being a 3 year old baby and the oldest being his 85 year old grandfather.

### **Question 10 – Has affected my parents financially.**

50% of the participants agreed that TC Winston had affected their parents financially as not only were their homes taken away, their plantations and source of income were all destroyed leaving them with nothing but a scar that will be with them forever. The parents had to stay strong for their children. One of the participated shared how his parents had tried to be brave towards them but he being the oldest child could figure out that there was sadness. The parents were left penniless as the crops they sold at the markets to support their families were all destroyed. Another participant said he would eat anything that was given to him as he could not complain but was very happy that none of his immediate family members died during the cyclone. Another 15 year old participant explained how he decided not to return to school because he felt sorry for his parents.

### **Question 11 – Had destroyed the school I study in.**

This devastating cyclone not only destroyed their homes as mentioned earlier, it also uprooted some roofs of the schools that they ran to for shelter. They were left wet throughout the day and into the night. Out of the 74 participants that took part in this research, 43% of them strongly agreed that there were damages to their schools. They lost their school supplies as they were damaged and their schools were also used as evacuation centers. The children had to study in tents donated by United Nations Children's Fund (UNICEF) and these were a start for the children. Most of the participants were also not mentally ready to get back to schools as the torment was just too much to handle. The teachers tried their level best but the younger ones became scared every time there was a loud noise or when it started to rain. One of the participants shared with tears in his eyes of how he would just quickly run to his brother's classroom and run home when it rained without even telling the teachers. The children were not prepared for the ordeal and the damaged classroom was not a place they wanted to study and look at as it brought back painful memories.

### **Recommendations and Conclusion**

Upon completion of this research, the following recommendations have been made on the psychological impacts of natural disasters on children. There is a great need for increased awareness programmes to be conducted in communities, villages and schools so that

citizens are aware of what to do before, during and after a natural disaster whether it be a cyclone, a tsunami, an earthquake, or a flooding.

The government may want to work with Non-governmental Organizations (NGOs) in raising awareness in communities on resilience after a natural disaster. Road shows may be organized by the National Disaster Management Office on Disaster management issues. Brochures, leaflets and booklets are an efficient approach of delivery for cyclone awareness information. The possible information provided to the public should be localised and based on identified community needs. Cyclone awareness campaigns should include a more detailed explanation of the use and relevance of cyclone tracking maps.

The Ministry of Education must ensure that disaster management is incorporated into the curriculum so that students know what to do when a natural disaster occurs. In addition, NGOs may organize psychological training programs for parents as children are the most vulnerable during disasters. Trainings may also include potential risks, human and physical elements that are most at risk, and safety actions to prevent or prepare for a potential disaster.

In addition, schools should set aside emergency funds in their allocated grants for an academic year which must be specifically used when a disaster occurs.

The spoken tropical cyclone messages that are aired on the radio and television should aim to include a more detailed description of the threatened area. The use and meaning of weather information, weather terms and warning advice messages should be consistent across all media and modes of delivery.

Government may organize awareness programs for those residing along the coasts by enhancing at a local level. The amount and quality of weather information that are made available on social media should be increased to meet the needs of the community expectations.

Counseling programs and psychosocial support is a priority and the Ministry of Health may want to train more health workers to teach others how to give Psychological First Aid (PFA) to people affected by a cyclone. Health workers can be from the Ministry of Health and some from volunteers' non-profit organizations and communities/villages.. PFA is an approach that reaches out to people in need of support, helping them address their basic needs, listening and comforting them and connecting them with information, services and social support that can help them (Pacific Technical Support website).

Whilst natural disasters of any kind are unexpected and unplanned, the cost of damages of TC Winston was \$2.98 billion.

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