

# Experiences, Coping Strategies, and Lessons Learned During Double Disaster in the Philippines: COVID-19 Pandemic and Typhoons

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## Research note

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# Abstract

## Objective

This study explores the impacts of double disaster: COVID-19 pandemic and typhoon, in terms of students' experiences, coping strategies, and lessons learned. Using the interviews from six students from different parts of the Philippines, this qualitative study applies a narrative analysis to interpret participants' lived experiences.

## Results

The occurrence of natural disasters during the partial lockdowns from pandemic brought stress among students in adopting the distance education, completing academic requirements, and accessing technology for online learning. Participants also expressed their anxieties on the spread of the virus in the community particularly in the disaster evacuation centers with less strictly observed social distancing, insufficient hygiene and sanitation facilities, and lack of basic needs. Participants described their coping strategies which include helping one another; following the government protocols; finding additional sources of income; using energy for important purposes only; and leaning on faith. Participants further shared insights with regard to the proper actions that citizens and government officials must do when double disaster hit the community.

## Introduction

Different countries are put into great dilemma in dealing with natural disasters while combating the spread of COVID-19 pandemic. Between February and June 2020, heavy rainfall increased the flooding in several lakes in East Africa which affected ecosystems and livelihoods particularly the fisherfolk who depend solely on fisheries as their only source of income [1]. In Bangladesh, people have experienced simultaneous disasters with the global pandemic and exceptionally prolonged flooding from the cyclone Amphan which resulted on losing millions of homes, livelihoods, and agricultural crops [2]. In April 2020, tropical cyclone Harold devastated four Pacific countries such as Solomon Islands, Vanuatu, Fiji, and Tonga leaving 30 fatalities and grave damage to properties, livelihood, communication, and transportation [3]. Pandemic, interacted with natural disasters, creates powerful impact for critical infrastructure such as hospitals, safe shelter and housing, utilities, water and sanitation, and transport [4].

In the Philippine context, three successive strong and super typhoons: Quinta (international name: Molave), Rolly (Goni), and Ulysses (Vamco) wreaked havoc between October to November 2020. These typhoons that raged across the archipelago were responsible for the occurrence of flash floods, storm surges, landslides, and lava flows. Such powerful storms destroyed houses, public infrastructures, farms, and loss of lives. According to National Disaster Risk Reduction and Management Council (NDRRM), these disasters have caused USD 0.63B damages; 170 fatalities; and affected 1.18 families or 3.85 million Filipinos. Meanwhile, there are 485,797 identified cases for COVID-19 with 9,398 deaths and 26,784 active cases in the country as of 09 January 2021. The natural disasters put the country's health

system into a test as the displaced populations complicate the COVID-19 initiatives with additional burden to the emergency of the country [5].

Double disaster affects the health, safety, and well-being of both individuals and communities. These translate into a range of emotional reactions and unhealthy behaviors such as distress, substance abuse, and non-compliance with public health directives [6]. Tertiary students constitute a particularly vulnerable population for mental health problems considering challenges commonly associated with their transitions to adulthood as well as the common economic and material difficulties of this population [7]. The current study aimed at exploring the challenges faced by students in coping up with the threats posed by the pandemic and natural disasters in the Philippines.

## **Methodology**

This study applied narrative analysis to explore participants' lived experiences, coping strategies, and lessons learned during double disaster. The data are collected using online survey from six tertiary students from different regions of the Philippines who experienced the effects of double disaster. The interviews were conducted in November 2020 after the successive strong typhoons while the selected provinces were still under community quarantine. Researchers carefully selected few participants to achieve the depth of information from the interviews rather than statistical representativeness. An interview guide is used to give the subjects the opportunity to describe their (1) experiences during double disaster; (2) coping strategies; and (3) lessons learned from their experience. To ensure ethical considerations of research, all participants are informed about the details of the study. Research participants are well-oriented that their participation in the study is voluntary and that they can withdraw anytime without any consequences. They are informed about the academic purpose of the study. The anonymity and confidentiality are ensured as only the researchers can access to the research data.

## **Results And Discussion**

This study investigated the two concurring events such as COVID-19 pandemic and natural calamities in the Philippines and its strong influence on the lives of Filipino college students using narrative analysis. Participants described their lived experiences, coping strategies, and lessons learned from these disasters. The complete narrative analysis of the interviews is detailed in the additional file [see Additional File].

Common experiences among the participants during the double disaster are stress, anxiety, and worries. These confirm previous studies that the outbreak of the pandemic, the implementation of abrupt control measures, and the uncertainty to contain the virus cause excessive fear, social isolation, widespread panic, and stress especially when social face-to-face interactions are lost [8-9]. To reduce the spread of the virus among students, the government mandated closure of schools which abruptly shifted the mode of education from traditional classroom instruction to distance learning. However, the lack of face-to-face interaction puts stress on the part of students particularly on understanding the lessons, completing the

academic requirements, and accessing the technology for online learning. These are aggravated by the recent typhoons and floods that resulted to a temporary relocation to evacuation centers, loss of learning materials (and properties), and occurrence of power outage. Moreover, financial problems have become additional burden to the family of the learners as they strive to earn a living during the pandemic and natural disaster.

Anxiety is a common response to any stressful conditions [10]. While there is a wide range of mental health outcomes, greater exposure to disasters is intuitively associated with higher levels of anxiety-related disorder symptoms [11]. In this study, participants revealed that the spread of the virus in the community is one reason to feel anxious. It is more evident from participants in the disaster evacuation centers with less strictly observed social distancing, insufficient hygiene and sanitation facilities, and lack of basic needs (food, clothes, water, shelter). This confirms previous study that the gradually increasing distances between people resulting from the quarantine may cause anxiety among students [12]. Additionally, family relatives or acquaintances being infected with COVID-19 is a risk factor in students' anxiety about the pandemic which relate to the high contagiousness of the new coronavirus pneumonia [13]. Participants also described anxiety on their academic status as the pandemic required them for distance learning while the effects of natural disaster posed other challenges on connecting to online resources as well as postponing of classes during the evacuation. This support previous study that, despite being useful, online programs provide significantly lower rates of self-perceived learning and satisfaction compared to classroom instruction particularly those with practical and laboratory classes [14]. Educational disruption and uncertainty about students' future are unavoidable by-products of the pandemic, but there is also a more fundamental emotional experience faced by many students [15].

Participants described their coping strategies which include 'Bayanihan'; following the government protocols; finding additional sources of income; using energy (of gadgets) for important purposes only; and leaning on faith. This is comparable with previous study that students manage their anxiety from the COVID-19 pandemic with personal coping strategies (e.g., wearing mask, hand washing); avoid going out in public places to avoid exposure from virus; being informed; use social media; chat with family and relatives to release stress and gain support; and keeping busy at home to avoid thinking about the virus; and leaning on faith by praying, worshiping, and reading the bible [16]. Additionally, the 'Bayanihan' is a Filipino value which means 'helping one another', 'community spirit', or 'solidarity'. This is a volunteer-driven effort by individuals, groups, or community organized to address the government support lapses and give urgent aid to those at risk. In 2020 alone, Filipinos portrayed the Bayanihan spirit as they extended their helping hands to the victims of Taal volcano eruption, poor families during the COVID-19 community quarantine, evacuees of the flooded communities, and the people who were heavily affected by the recent typhoons.

Despite the major challenges faced by the students in coping with the impacts of double disaster, participants demonstrated flexibility and resilience which may not have experienced in a normal setting. Participants learned to strictly follow health protocols and adapt to the "new normal" environment. They describe a positive outlook, resilience, unity in times of distress, and being grateful for everything

(material and nonmaterial) they receive during the double disaster. These confirm previous work that students, despite feeling uncertain towards the future, express their hopefulness and optimism, and see themselves emergent from the pandemic as self-reflective, resilient, and socially responsive adults [17]. Further, encouraging individual and family strengths during difficult times counter a sense of helplessness, failure, and despair as these reinforce a shared pride, confidence, and a “can do” spirit [18]. In terms of studies, participants learned to adapt using digital technologies for attending online classes, obtaining information from credible sources, communicating with peers, as well as preparing and submitting school requirements. The knowledge and skills developed through this change will be relevant to future work opportunities for these students and will be representative of the thinking for future education and training which include use of technology, digital literacy, and communication skills [19].

Beyond personal lessons, participants further shared insights on what the community and the government must do to be prepared for future disasters. These include civic activities for environmental rehabilitation, constructing more well-equipped disaster evacuation centers, strengthening health care system, and more resilient urban planning system. In times of crises, the government, health agencies, and disease experts should work together and immediately take actions to combat the pandemic and to tackle inevitable climate-related disasters to reduce casualties and economic downturns [20-21]. More inclusive emergency responses should be complemented with policy measures safeguarding the continuity of basic services such as electricity, water, and other utilities that are very crucial during the time of disasters [22-23]. Moreover, the government policies should be more critical in urban planning to make cities and communities environment-friendly; more resilient to any disasters; and provide safer, healthier, and comfortable living conditions to all citizens.

## **Conclusion**

Using narrative analysis, we found that double disaster affects the total well-being of community members as it complicates the challenges brought by the pandemic with natural calamities. Students are particularly vulnerable for emotional and mental health problems considering challenges commonly associated with their transitions to adulthood. Higher education institutions should play an important role in assisting the students to cope with these challenges. With the advent of digital technologies, institutions should not only pay attention on the development of digital platforms for distance education but also on the formulation of digital psychological interventions that may moderate the emotional and mental impacts of disasters on students. Lastly, education stakeholders must collaborate with local government units and non-governmental organizations in crafting more inclusive policies that can address the psychological impacts of double disaster or any future disasters on students.

## **Limitations of the study**

This study used non-random sampling and small sample size which lacks representativeness of the participants. Narrative analysis, as the qualitative method employed, is concerned with the depth of the participants’ personal experiences, hence, makes it more difficult to generalise and compare results

across the country. Finally, the double disaster in this study only covered the pandemic and typhoon, which should have included the combinations of various natural and man-made disasters.

## **Declarations**

### **Ethics approval and consent to participate**

We conducted the study according to the guidelines laid down in the Declaration of Helsinki. Participants were informed on the purpose of the study and its implications. Informed written consent was obtained from the participants. Participation was purely voluntary, and participants could withdraw from the study without any consequences. Confidentiality and anonymity were guaranteed before administering the interviews.

### **Consent for publication**

Not applicable.

### **Availability of data and materials**

The interview transcripts are available from the corresponding author on reasonable request. The complete narrative analysis of the interviews is detailed in the Additional File.

### **Competing interests**

The authors declare that they have no competing interests.

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### **Authors' contributions**

Conceptualization, C.B.A. and L.J.C.; methodology, C.B.A. and L.J.C.; validation, C.B.A.; formal analysis, L.J.C.; investigation, L.J.C.; data curation, L.J.C.; writing—original draft preparation, L.J.C. and C.B.A.; writing—review and editing, L.J.C.; supervision, C.B.A.; project administration, L.J.C. All authors have read and agreed to the published version of the manuscript.

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