

## DISASTER PREPAREDNESS ON NATURAL CALAMITIES AMONG STUDENTS OF UNIVERSITY OF SOUTHEASTERN PHILIPPINES REGION XI: BASIS FOR A PROPOSED INTERVENTION PROGRAM

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### Abstract:

The need for emergency preparedness regarding natural disasters at higher education institutions has become apparent. College Students are increasingly vulnerable to the negative impact of disasters due to lack of experience and continued dependency on others. The study aimed to understand the students' disaster response to natural disasters and to craft a necessary intervention program to achieve disaster resilience. The research used a descriptive research design utilizing an Input-Process-Output model conducted at University of Southeastern Philippines in its three campuses in Region XI, namely: Obrero, Mintal and Tagum-Mabini. Using a stratified random sampling method, 358 students were determined to be part of the respondents of the study. A researcher-made survey questionnaire using a 5-point Likert scale was employed which has been validated and piloted with a Cronbach alpha result of 0.943. Results showed that most of respondents were 19-20 years old, female, from the College of Engineering and Obrero Campus. The overall disaster preparedness is high with a mean of 3.50, the students were highly prepared on earthquake with a mean of 3.65 and moderately prepared on fire at 3.21. It is recommended that disaster preparedness be incorporated in NSTP programs and seminars on natural calamities be conducted.

### Introduction:

Disaster preparedness is one of the most important concepts that everyone must embody. It tells how our community prepares to lessen the impact of the upcoming disaster. It relates to the different measures done to prepare for and reduce the outcome of a disaster.

"Imagination is more important than knowledge". This is how Philippine Institute of Volcanology and Seismology (PHIVOLCS) Director Dr. Renato U. Solidum, Jr. quoted the famous physicist Dr. Albert Einstein as he discussed the importance of disaster preparedness during the Summit of Nurse Coordinators in Disaster and Emergency Management at Philippine Nurses Association Auditorium in August 2015. He emphasized that during disasters someone who imagines what will happen will know what to do to

prevent it, rather than a knowledgeable man who doesn't imagine what to do, will end up unprepared and be a casualty.

In 2012, the Department of Education reported that there were more than 400 public schools that have been damaged by typhoon Pablo. Most of the schools were from the provinces of Davao Oriental, Davao del Norte, Compostela Valley and Surigao del Sur including Surigao City and Tagum City. Most of the provinces were not typhoon-prone areas in the past years. Typhoon has never been a problem in these provinces because of its mountainous geography. Everyone was caught unaware, proud trees of straight postures bowed down as the gush of wind

And heavy rains enveloped the area. Provincial and City Governments issued suspension of classes

and work. Hospitals issued orange code for disaster and schools including higher education institutions were not spared from the rant of Mother Nature. School roofing were flown, big tree branches were broke like twigs, window glasses were shattered and missing students were reported as a result of the disaster.

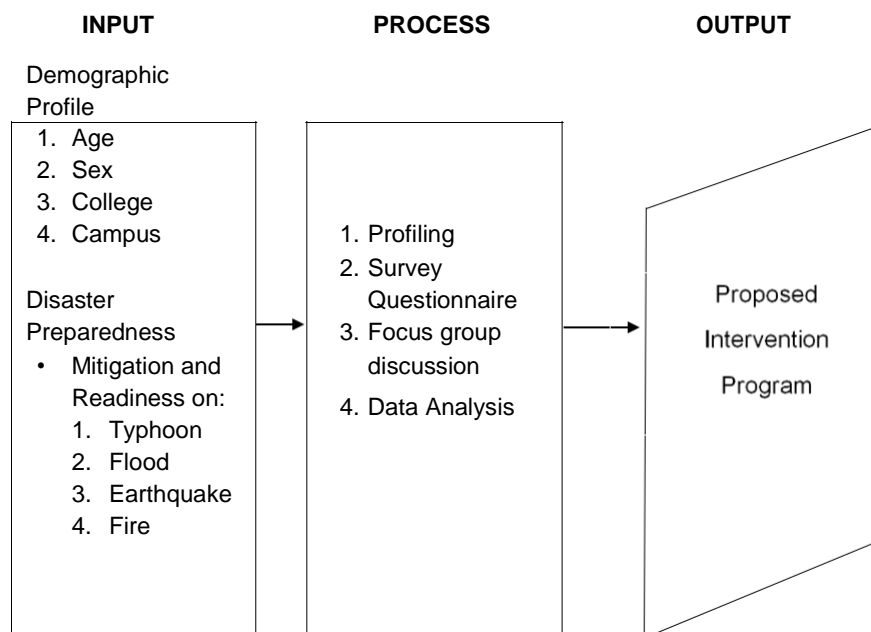
The importance of disaster preparedness regarding natural disasters at higher education institutions has become apparent. College students were also affected and vulnerable to the negative impact of disasters due to deficiency of actual experience of disasters and dependency on others. Students were caught unaware of the things that must be observed during an actual disaster. Also, students tend to delineate their incompetence from lack of experience on an actual scenario.

Despite these, few researches spoke about the impacts of disaster on public health. Disaster literatures clearly identify that it is not enough to merely have a plan in place. More importantly, the community must understand it. Due to the increase of the frequency and magnitude of natural disasters in the Philippines particularly in Davao Region, the research is relevant to understand the students'

disaster response plans and emergency preparedness efforts on natural calamities in the University of Southeastern Philippines in order to craft the necessary intervention programs. These will help in the disaster preparedness of the students and the institution.

**Research Design**

The researcher used descriptive research design using the Input-Process-Output method in the conduct of this study. This method was utilized to understand and explain the disaster preparedness on natural calamities among students of University of Southeastern Philippines. To depict the participants in an accurate way, a researcher-made-survey questionnaire was used to assess the disaster preparedness of the students. The survey questionnaire was divided into two parts. The first part generated the demographic profile of respondents while the second part of the survey depicts the disaster preparedness of the students on natural calamities. The study is also designed to craft an intervention program. The intervention program will be a guide to the development and selection of the content and strategies that shall be enhanced by the students.



**Figure 1. Research Paradigm**

**Setting**

The study was conducted at the University of Southeastern Philippines, a regional state university created in 1978 through Batas Pambansa Bilang 12. The University is an integration of four state institutions, particularly, the Mindanao State University-Davao, the University of the Philippines-Master of Management Program in

Davao, the Davao School of Arts and Trades, and the Davao National Regional Agricultural School. The university has four campuses, namely, Obrero (main) and Mintal Campuses in Davao City, Tagum-Mabini Campus which has two units – one in Tagum City and one in Mabini, Compostela Valley Province, and Bislig Campus in Surigao del Sur.



**Figure 2. Site Map**

**Respondents**

A stratified random sampling method has been conducted to get the specified number of third year students who will be representing their college. Using Slovincs’ formula to get the sample population among the 3, 385 3<sup>rd</sup> year students of University of Southeastern Philippines in the three campuses located strategically in Region XI (Obrero, Mintal, and Tagum-Mabini Campus), a

sample population of 358 were considered. Only students with regular load were included as sample respondents of the study. Students with 15 units and below of the current school year were not included in the selection process. A five (5) percent margin of error was allowed and considered. The names of students were obtained from the registrar’s office to serve as bases for the list.

**Table 1: Distribution of respondents by college.**

No.	College	Total No. of 3 <sup>rd</sup> year students	Sample Student Respondents
1	College of Teacher Education and Technology (CTET)	467	49
2	College of Agriculture and Related Sciences (CARS)	325	34
3	College of Arts and Sciences (CAS)	407	43
4	College of Education (CED)	391	41
5	College of Technology (CT)	396	42
6	College of Engineering (CE)	506	54
7	Institute of Computing (IC)	253	27
8	College of Business and Governance (CGB)	256	27
9	School of Applied Economics (SAEC)	106	11
10	College of Business and Governance – Mintal (CGB-Mintal)	278	30
Over All		3, 385	358

**Measure**

The research instrument used in the study was a researcher-made questionnaire which contains two (2) parts: Part I – Demographic profile of the respondents reflecting the age, sex, college and campus of the participants, and Part II – Questions that reflect the disaster preparedness of the students in natural calamities. The second part of the questionnaire was subdivided into the four parts to cater to four natural calamities, specifically disaster preparedness on typhoon, flood, earthquake and fire employing the 5-point Likert Scale.

The questionnaire was validated by three (3) experts in the field of nursing research and underwent a pilot study to one hundred (100) respondents. Reliability test was done and it achieved a Cronbach alpha result of 0.943 verbally interpreted as “highly reliable”.

Using the Likert’s scale, 5 is considered as the highest and 1 as the lowest. The scaling parameters for the interpretation with the corresponding verbal interpretation are used to quantify respondents.

Parameter Limit	Verbal Description	Interpretation
5	Always	This means that students mitigation and readiness on natural disasters are observed in all occasions.
4	Often	This means that students mitigation and readiness on natural disasters are observed in most occasions.
3	Sometimes	This means that students mitigation and readiness on natural disasters are observed in some occasions.
2	Seldom	This means that students mitigation and readiness on natural disasters are rarely observed.
1	Never	This means that students mitigation and readiness on natural disasters are not observed.

**Statistical Tools**

Data were subjected to statistical treatments. These are represented by the following statistical tools:

**Frequency and Percentage.** This was used to study the demographic profile of the respondents.

**Mean.** This was used to determine the respondents’ mitigation and readiness in different natural calamities like typhoon, flood, earthquake and fire.

**Scope and Limitation of the Study**

The study has focused in finding out the respondents’ disaster preparedness on natural calamities. The respondents of this study were the regular third year undergraduate students of the University of Southeastern Philippines with regular load of not less than 15 units from the three campuses of USEP in Region XI, namely: Obrero, Mintal and Tagum-Mabini. The descriptive method

as used discussing the Input-Process-Output model to determine the extent of disaster preparedness of the students on natural calamities and come up with the output or the proposed intervention program for the students. This study has been conducted from November 2017 to March 2018.

**Summary of Findings**

The study was focused on finding out the disaster preparedness on natural calamities among students of University of Southeastern Philippines (USEP).

The study used a descriptive research design utilizing the Input-Process-Output method. This involved 358 participants who were selected through stratified random sampling. The study was conducted to the three different campuses of USEP namely the Obrero, Mintal and Tagum-Mabini. The study was conducted from November 2017 up to March 2018.

Based on the data gathered, the following results were derived:

1. Most of the respondents belonged to age bracket 19-20 consisting of 269 or 60.06%, females consisted of 231 or 64.53% respondents, from the College of Engineering consisted of 54 or 15.08%, and majority came from Obrero campus consisting of 245 or 68.44%.
2. Mitigation and readiness of respondents during typhoon obtained a mean of 3.60 or high, mitigation and readiness of respondents during flood obtained a mean of 3.52 or high, mitigation and readiness of respondents during earthquake obtained a mean of 3.65 or high while mitigation and readiness of respondents during fire obtained a mean of 3.21 or moderate. The overall disaster preparedness on natural calamities of students of University of Southeastern Philippines obtained a mean of 3.50 or high.

### Conclusions

In the light of the previous findings of the study, the following conclusions were drawn as follows:

1. The respondents were predominantly late adolescents, females, from the College of Engineering and from Obrero Campus.
2. The overall level of disaster preparedness on natural calamity of students in University of Southeastern Philippines Region XI was high. It is deemed as “partially prepared”.

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## KHẢ NĂNG SẴN SÀNG ỨNG PHÓ VỚI THIÊN TAI CỦA SINH VIÊN ĐẠI HỌC ĐÔNG NAM PHILIPPINES KHU VỰC XI: ĐỀ XUẤT MỘT CHƯƠNG TRÌNH CAN THIỆP CƠ BẢN

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### Thông tin bài viết

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*Y tế công cộng, Chuẩn bị sẵn sàng cho thảm họa, Thiên tai, Mô tả, Khu vực XI*

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### Tóm tắt

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Nhu cầu chuẩn bị sẵn sàng khẩn cấp về thiên tai tại các cơ sở giáo dục đại học đã trở nên rõ ràng. Sinh viên đại học ngày càng dễ bị ảnh hưởng bởi tác động tiêu cực của thiên tai do thiếu kinh nghiệm và tiếp tục phụ thuộc vào người khác. Nghiên cứu nhằm mục đích tìm hiểu khả năng ứng phó với thiên tai của học sinh và xây dựng chương trình can thiệp cần thiết để đạt được khả năng chống chịu với thiên tai. Nghiên cứu sử dụng thiết kế nghiên cứu mô tả sử dụng mô hình Đầu vào - Quy trình - Đầu ra được thực hiện tại Đại học Đông Nam Philippines tại ba cơ sở của trường ở Vùng XI, đó là: Obrero, Mintal và Tagum-Mabini. Sử dụng phương pháp chọn mẫu ngẫu nhiên phân tầng, 358 sinh viên được xác định là một phần của những người trả lời nghiên cứu. Một bảng câu hỏi khảo sát do nhà nghiên cứu thực hiện sử dụng thang điểm Likert 5 điểm đã được sử dụng, đã được xác thực và thử nghiệm với kết quả Cronbach alpha là 0,943. Kết quả cho thấy hầu hết những người được hỏi trong độ tuổi 19-20, là nữ, đến từ Trường Cao đẳng Kỹ thuật và Cơ sở Obrero. Mức độ chuẩn bị sẵn sàng cho thiên tai nói chung là cao với mức trung bình là 3,50, các sinh viên đã chuẩn bị cao cho trận động đất với mức trung bình là 3,65 và chuẩn bị vừa phải khi cháy ở mức 3,21. Khuyến nghị nên lồng ghép công tác phòng ngừa thiên tai vào các chương trình NSTP và tiến hành các cuộc hội thảo về thiên tai.

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