# From Risk to S.A.F.E.R. School: Evaluating the Disaster Awareness and Preparedness of the Employees in a Higher Education Institution

**Peter Arnold T. Tubayan, RN, MAN, PhD., Victor P. Degamo, RN, MN, LPT**

**Department of Nursing, University of Southern Philippines Foundation**

**DOI: https://doi.org/10.51244/IJRSI.2025.12120158**

**Received: 02 January 2026; Accepted: 07 January 2026; Published: 19 January 2026**

## ABSTRACT

**Purpose:** The study aimed to evaluate the level of disaster awareness and preparedness of the employees in a Higher Education Institution. It also determined the relationship between variables and the factors that influence disaster awareness and preparedness.

**Method:** The study used a descriptive-correlational design utilizing both quantitative and qualitative approaches in determining the level of disaster awareness and preparedness of the 212 employees in a higher education institution which utilized a complete enumeration. There were 30 randomly selected participants involved in the interview. The study utilized a researcher-made questionnaire and a validated tool to evaluate the level of disaster awareness and awareness. Both questionnaires were pre-tested using Cronbach's reliability testing. The study also utilized an interview guide question on factors that influence disaster awareness and preparedness. The study was analyzed using simple percentage, weighted mean, chi- square and spearman rant test. Thematic content analysis was used to interpret and analyze qualitative data.

**Results:** The employees are partially aware and partially prepared on disaster. Age, length of service and number of related trainings and seminars attended were found to have a significant relationship with the level of disaster awareness. The level of disaster preparedness was found no significant relationship to the profile. The factors that facilitate disaster awareness are trainings and seminars, disaster manual, information campaign, and warning signs. The facilitating factors for disaster preparedness are disaster drills, emergency equipment, evacuation plan, and trainings and seminars. The hindering factors for disaster awareness are passive attitude, inadequate information, limited resources, and insufficient warning signs. The factors that hinder disaster preparedness are equipment and facility uncertainty, passive attitude, and dormant disaster risk reduction team.

**Conclusion:** There is a strong positive correlation between the employees' disaster awareness and preparedness. Based on the findings, S.A.F.E.R. School (Stronger Actions for Emergency Response) Safety Management System was proposed.

**Keywords:** Evaluation, disaster awareness, preparedness, higher education institution, safer school

## INTRODUCTION

Disaster is a natural or human-caused hazard that causes a serious disruption of the functioning of a community involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. The concern over natural disasters is increasing globally. During the last two decades, loss of life and property due to disasters has increased. Disasters like floods, earthquakes and fire pose serious threat to people (Marskole, 2018).

According to a 2017 report by the Center for Research on the Epidemiology of Disasters (CRED, 2017), 335 natural disasters impacted over 95.6 million individuals and caused nearly 10,000 deaths. The impact was disproportionate, with Asia bearing the brunt of floods and storms, accounting for almost half of all disaster incidents, the majority of fatalities, and the vast majority of affected people. The Asia-Pacific region is

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

particularly vulnerable, with the poorest nations and communities suffering the most. Current trends suggest that increasing migration to urban slums in this region will likely exacerbate the devastation caused by natural events.

The Philippines' geographical location makes it highly susceptible to natural hazards. Disasters are a recurring reality in the country, which lies within the Pacific Ring of Fire, predisposing it to geological events like volcanic eruptions and seismic activity. Its location also exposes it to frequent meteorological hazards, including a range of tropical cyclones (tropical depressions, storms, severe storms, typhoons, and super typhoons). In 2013, the Philippines endured a powerful earthquake and Super Typhoon Yolanda, which inflicted widespread damage across numerous islands.

The Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA) reports that approximately 20 tropical cyclones enter the Philippine area of responsibility each year. This positioning results in a high likelihood of floods, storm surges, and strong winds. The strongest storm ever recorded struck the Visayas region, yet half of the local government units (LGUs) in Central Visayas still lack disaster contingency plans. Furthermore, fewer than half of the towns and cities in Cebu province possess concrete action plans for responding to disasters, according to the Central Visayas Office of Civil Defense.

Disasters are unpredictable events that can occur anywhere, anytime, and on varying scales. Due to their sudden nature, preparation time is often limited. Therefore, proactive planning is essential to mitigate the severity of their effects. These preventive actions aim to reduce the impact on vulnerable groups, prepare organizations for increased activity, and develop coordinated plans to optimize resource allocation. Effective disaster preparedness can maximize the preservation of life and property and facilitate a swift return to normalcy for affected populations.

Cebu City, a rapidly growing metropolitan area in the Philippines, actively participates in the national disaster risk reduction program (Cebu City, 2013). Situated in the typhoon-prone Visayas region, Cebu City continually grapples with disaster-related challenges (Cebu City, 2013). It is the second-largest growth center in the country, with a high population density in its urban areas (Cebu City Profile, 2008). The city's terrain, characterized by steep slopes, is inherently susceptible to landslides. According to Simeon Romarate of the Cebu City Disaster Risk Reduction and Management Office (CCDRRMO), disaster-related issues are exacerbated by factors such as excessive land development, high migration, traffic congestion, and informal settlements in vulnerable areas.

The Philippine Institute of Volcanology and Seismology (PHIVOLCS, 2017) has identified several active fault lines traversing cities and municipalities in Cebu. These faults, part of the Cebu Fault System, are categorized into the “Central Cebu Fault” and the “South Cebu Fault.” The Central Cebu Fault crosses Danao, Cebu, Talisay, Naga, and Toledo, as well as Compostela, Minglanilla, and Balamban. The South Cebu Fault passes through Carcar City and Sibonga, Argao, Moalboal, Badian, Alegria, Dalaguete, Alcoy, and Boljoon. Given the unpredictability of disasters, schools must prioritize student safety and preparedness during school hours. By implementing a comprehensive, all-hazards management approach, including practical environmental preparedness measures, well-defined plans, and regular disaster drills, schools can significantly reduce injuries, fatalities, and property damage, thereby enhancing their resilience.

The safety of the employees, students and visitors is an important responsibility of a school or a company as mandated by the Department of Labor and Employment and the Commission on Higher Education. Safety hazards that may cause any harm to any individual should be attended promptly. The researchers observed a number of safety hazards in the university that drawn their attention to investigate and conduct a research, some of these disaster hazards are the rooms are not all provided with smoke detectors and water sprinklers, no proper signages and posters of the evacuation routes and floor plan, no orientation for the new employees on school safety especially on disaster preparedness, employees are not oriented with the process flow, emergency plan and evacuation protocols in case of disaster, rooms and hallways are not equipped with emergency lights in case of electrical shut off.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

As a professional nurses working in this institution, there is a critical role in the medical preparedness and response to disasters of all kinds, working to safeguard the health and wellbeing of the students. As a reliable responder, and to show compassion typically compels to respond to those in need, even when it puts its own safety or well-being at risk. There is a strong relationship between the nurse and the public who expects that nurses and other health care providers will respond to the needs in an emergency or in other types of disaster resulting in mass injury or illness. Given the growing number of incidents and disasters, health service providers play a key role before, during and after these events and its preparedness is crucial.

# METHOD

## Participants

Data were obtained from the employees in a private higher education institution in Cebu. There were a total of 292 employees, 122 non-teaching and 170 teaching personnel. Forty-one teachers from primary level, 46 from secondary level and 83 from tertiary level. There were only 212 questionnaires retrieved. The study utilized a complete enumeration of the population. The study also involved 30 research participants which is randomly selected for interview.

The study used a descriptive-correlational design utilizing both quantitative and qualitative approaches in determining the profile, level of disaster awareness and preparedness of the employees. It also determined the relationship between employee's profile and their level of disaster awareness and preparedness as well as the relationship of the variables correlated. Furthermore, this study also determined other factors that influence disaster awareness and preparedness among the employees.

## Population

The study covered all regular, full-time employees currently working in a private higher education institution in Cebu. A total of two hundred twelve respondents was included in the study which utilized a complete enumeration of the population.

## Measurement

The study utilized a researcher-made questionnaire patterned from the school's and PAG-ASA risk reduction management guidelines for earthquake, fire and typhoon. This tool was used to measure the level of awareness of the employees to disaster. It has three sub-variables; for fire safety, it is composed of 14 indicators, for earthquake safety has 15 indicators and lastly for typhoon safety has 5 indicators. Each statement has 4-point likert scale wherein 4 – strongly agree, 3 – agree, 2 – disagree and 1 – strongly disagree. The study also used a validated tool adopted from a previous study entitled "Disaster Preparedness in Secondary Schools in Homa Bay County, Kenya" by Akumu (2011). The tool was modified to fit in the locale of the study. The tool has 24 indicators consist of wide range of measures, both long-term and short term, designed to save lives and limit the amount of damage that might otherwise be caused by disaster. Both questionnaires for disaster awareness and preparedness were pre-tested to ensure the reliability of the instrument through the use of Cronbach's reliability of test.

## Analysis

The quantitative data was analysed using IBM SPSS Statistics software, version 29. To determine the profile of the respondents, the Simple Percentage was be used. The Weighted Mean was utilized to determine the level of disaster awareness and preparedness of the employees. Furthermore, the Chi- Square was utilized to determine the relationship between the profile sex, civil status, and highest educational attainment and the level of disaster awareness and preparedness. Since data for age, length of service, and number of related trainings and seminars attended are not normalized, non-parametric Spearman Rant Test was utilized. This test was also used to determine the relationship of disaster awareness and preparedness. And lastly, a thematic content analysis was used to interpret and analyse qualitative data.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

# RESULTS

## Profile of the Employees

This presents the profile of the respondents as to age, gender, civil status, highest educational attainment, length of service, and number of related trainings and seminars related to disaster attended.

Table 1 presents the profile of the employees.

| Profile | Frequency n = 212 | Percentage % |
|---|---|---|
| **Age** | | |
| 21 - 39 | 159 | 75 |
| 40 - 65 | 53 | 25 |
| **Gender** | | |
| Male | 67 | 31.60 |
| Female | 145 | 68.40 |
| **Gender** | | |
| Single | 122 | 57.55 |
| Married | 82 | 38.68 |
| Widow/Widower | 5 | 2.36 |
| Separated | 3 | 1.42 |
| **Highest Educational Attainment** | | |
| College Level | 18 | 8.49 |
| College Graduate | 84 | 39.62 |
| With Masteral Units | 57 | 26.89 |
| With Masteral Degree | 25 | 11.79 |
| With Doctoral Units | 16 | 7.55 |
| With Doctoral Degree | 12 | 5.66 |
| **Length of Service** | | |
| Less than 1 year to 5 years | 119 | 56.13 |
| 6 – 10 years | 40 | 18.87 |
| 11 – 15 years | 26 | 12.26 |
| 16 – 20 years | 18 | 8.49 |

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

| | | |
|---|---|---|
| 21 years and above | 9 | 4.25 |
| **No. of Related Trainings and Seminars Attended** | | |
| 0 – 3 | 173 | 81.60 |
| 4 – 6 | 35 | 16.51 |
| 7 - 9 | 4 | 1.89 |

Table 1 reveals one hundred fifty nine out of 212 or 75% of the respondents are from ages 21 – 39 years old while the minority or 53 (25%) are from ages 40 - 65. Findings show that the research locale is composed of the relatively young and determined millennial workforce governed by seasoned managers in their forties representing the Generation Xers. The result also shows that the minority or 67 (31.60%) out of 212 respondents are male, while the majority or 145 (68.40%) are female. This may due to that fact that the male teachers occupy only a very small portion of the entire teacher population in the country at present. Additionally, as to the civil status, 122 or 57.55% are single, 82 or 38.68% are married, 5 or 2.36% is widowed and 3 or 1.42% is separated. Moreover, it reveals that the respondents' educational status, eighteen or 8.49% of them are college level while 84 (39.62%) are College graduate. Fifty-seven or 26.89% have Masteral units and on the other hand, 25 (11.79%) are Masteral degree holder. Additionally, 16 (7.55%) have Doctoral units, while 12 (5.66%) have a Doctoral degree.

Furthermore, the study found that 119 (56.13%) out of 212 respondents have been an employee of the school for less than 1 year, 40 (18.87%) have been in the institution for 6 - 10 years, 26 (12.26%) for 11 – 15 years, 18 (8.49%) for 16 – 20 years while 9 (4.25%) of the respondents have been working for as long as 21 years and above. Lastly, as to the number of disaster related trainings and seminars attended by the respondents, one hundred seventy-three or 81.60% have only attended 0 – 3, thirty-five or 16.51% of them have attended 4 – 6, while 4 or 1.89% have attended 7 – 9 seminars and/or trainings related to research.

**Disaster Awareness of the Employees**

Table 2 presents the disaster awareness of the employees.

| **Statements** | **Mean** | **Interpretation** |
|---|---|---|
| **Fire Safety** | | |
| **I am aware of the following:** | | |
| 1. Role/ disaster designation and responsibilities in case of fire. | 3.04 | Partially Aware |
| 2. Disaster response team activation and its roles, responsible point person. | 3.02 | Partially Aware |
| 3. Fire evacuation plan, floor plan, route, traffic flow of employees/ students. | 3.13 | Partially Aware |
| 4. Evacuation area designated for your department (soccer field, parking lot) | 3.15 | Partially Aware |
| 5. Fire response, communication and reporting. | 2.99 | Partially Aware |
| 6. Fire action plan: | | Partially Aware |
| a. Rescue and evacuate those in danger. | 3.15 | Partially Aware |
| b. Alarm the fire by pulling the fire alarm pull boxes and call emergency. | 3.20 | Partially Aware |

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

| | | |
|---|---|---|
| c. Confine and contain the fire by closing doors and windows to the fire. | 2.91 | Partially Aware |
| d. Extinguish the fire if safe to do so. | 3.10 | Partially Aware |
| 7. Type and use of fire extinguisher: | | Partially Aware |
| a. Pull the pin to unlock the extinguisher. | 3.21 | Partially Aware |
| b. Aim the extinguisher at the base of the fire. | 3.19 | Partially Aware |
| c. Squeeze the handle of the extinguisher to activate. | 3.21 | Partially Aware |
| d. Sweep the base of the fire from side to side. | 3.19 | Partially Aware |
| 8. Location of the fire extinguisher, fire alarm boxes, fire exits, fire floor plan. | 3.24 | Partially Aware |
| **Average Mean** | **3.12** | **Partially Aware** |
| **Earthquake Safety** | | |
| **I am aware of the following:** | | |
| 1. Role/ disaster designation and responsibilities in case of earthquake. | 3.06 | Partially Aware |
| 2. Disaster response team activation and its roles, responsible point person. | 2.98 | Partially Aware |
| 3. Earthquake evacuation plan, floor plan, route, traffic flow. | 3.11 | Partially Aware |
| 4. Evacuation area designated for your department. (soccer field, parking lot) | 3.18 | Partially Aware |
| 5. Earthquake response, communication and reporting to responsible point. | 3.10 | Partially Aware |
| 6. Earthquake Action Plan: | | |
| a. If you are inside, stay inside. Do not run outside during shaking | 3.18 | Partially Aware |
| b. Drop down to the floor onto your hands and knees. | 3.28 | Highly Aware |
| c. Cover your head and neck under the shelter of a sturdy table or desk. | 3.33 | Highly Aware |
| d. Get down near an interior wall or next to a low – lying furniture. | 3.20 | Partially Aware |
| e. Cover head and neck with arms and hands or book, pillows. | 3.34 | Highly Aware |
| f. Hold on to your shelter until the shaking stops. | 3.23 | Partially Aware |
| g. Move away from glass fixtures, windows and outside walls. | 3.30 | Highly Aware |
| h. Do not use elevators. | 3.34 | Highly Aware |
| i. Stay away from utility wires, fuel and gas lines. | 3.35 | Highly Aware |
| 7. Location of the emergency exits and floor plan. | 3.22 | Partially Aware |
| **Average Mean** | **3.21** | **Partially Aware** |

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

| | | |
|---|---|---|
| **Typhoon Safety** | | |
| **I am aware of the following:**<br>1. Role/ disaster designation and responsibilities in case of typhoon. | 3.11 | Partially Aware |
| 2. Disaster response team activation and its roles, responsible point person to contact and declare the cancellation of classes. | 3.03 | Partially Aware |
| 3. Typhoon disaster process flow, coordination, channeling and communication of information. | 2.95 | Partially Aware |
| 4. Master list of families and parents with contact numbers. | 2.98 | Partially Aware |
| 5. Typhoon Action Plan | 2.90 | Partially Aware |
| **Average Mean** | **2.99** | **Partially Aware** |
| **Grand Mean** | **3.11** | **Partially Aware** |

Table 2 illustrates the disaster awareness of the employees vary from partially aware to highly aware with most number of the employees are partially aware and only a few employees are highly aware. Generally, the awareness of the employees on disaster is partially aware with grand mean of 3.11.

Specifically, disaster awareness of the employees on fire is partially aware with an average mean of 3.12. The indicators of fire safety with the lowest scores as to the awareness of the employees are the disaster response team activation and its roles, responsible person to contact in case of fire (3.02) rated as partially aware, fire response, communication and reporting (2.99) interpreted as partially aware, and confine and contain the fire and smoke by closing the doors and windows of the area of fire is partially aware (2.91). Employees' disaster awareness on earthquake safety is partially aware with an average mean of 3.21, interpreted as partially aware. The indicators with lowest scores on disaster awareness on earthquake safety are earthquake response, communication and reporting to the responsible person viewed as partially aware (3.10), the role, disaster designation and responsibilities in case of earthquake with mean score of 3.06, interpreted as partially aware, and disaster response team activation and its roles, responsible person to contact in case of earthquake (2.98), rated as partially aware. The disaster awareness on typhoon safety, employees are partially aware with average mean of 2.99. The lowest scores which the employees has partially awareness on typhoon safety are masterlist of families and parents with contact numbers (2.96), typhoon disaster process flow, coordination, channeling and communication of information (2.95), and typhoon action plan (2.90).

**Disaster Preparedness**

Table 3 exhibits the disaster preparedness of the employees.

| **Statements** | **Mean** | **Interpretation** |
|---|---|---|
| 1. The school has disaster management and preparedness policy or circulars. | 2.97 | Partially Prepared |
| 2. In case of disaster, the school has: | | Partially Prepared |
| a. Quick response team protocol | 2.92 | Partially Prepared |
| b. Evacuation protocol | 3.03 | Partially Prepared |
| c. Protocol on personnel's' role during disaster | 2.92 | Partially Prepared |

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

| | | |
|---|---|---|
| d. Coordination and communication protocol | 2.93 | Partially Prepared |
| e. Alarm system activation protocol | 3.03 | Partially Prepared |
| f. First aid team protocol | 2.97 | Partially Prepared |
| 3. The school has emergency funds in the event of disaster. | 2.85 | Partially Prepared |
| 4. The school has disaster emergency plan. | 2.97 | Partially Prepared |
| 5. Availability of the following in the disaster emergency plan: | | Partially Prepared |
| a. The school has an organized disaster committee/ crisis team. | 2.90 | Partially Prepared |
| b. In case of a disaster is readily available or accessed. | 2.83 | Partially Prepared |
| c. The school has adequate warning alarms. | 2.92 | Partially Prepared |
| d. Emergency exits are clear and unobstructed. | 3.0 | Partially Prepared |
| e. Evacuation routes are properly labelled. The corridors are well lit/ ventilated. | 3.04 | Partially Prepared |
| f. There is a designated evacuation area/ for all school personal and students | 3.02 | Partially Prepared |
| g. Employees are properly informed on the telephone and who to contact. | 2.84 | Partially Prepared |
| 6. The employees has an access of the emergency disaster manual. | 2.74 | Partially Prepared |
| 7. Disaster emergency plan reviewed every year. | 2.79 | Partially Prepared |
| 8. The school conducts training on the following disaster response: | | Partially Prepared |
| a. Prevention of disasters in school | 2.92 | Partially Prepared |
| b. Operating firefighting gadgets (fire extinguisher) | 3.0 | Partially Prepared |
| c. Contacting police or emergency numbers | 2.92 | Partially Prepared |
| d. Operating an emergency kit | 2.90 | Partially Prepared |
| e. Evacuation measures | 3.0 | Partially Prepared |
| f. Firefighting and disaster techniques | 2.98 | Partially Prepared |
| 9. School is equipped with disaster preparedness facility and equipments: | | Partially Prepared |
| a. Emergency lights in rooms and hallways in case of electricity shut off | 2.93 | Partially Prepared |
| b. Fire extinguishers and its location | 3.13 | Partially Prepared |
| c. Smoke detectors in every room | 2.67 | Partially Prepared |
| d. Fire alarms and its location | 2.88 | Partially Prepared |

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

| | | |
|---|---|---|
| e. Water sprinklers in every room | 2.54 | Partially Prepared |
| f. Automatic light signage of fire exits/ routes in case of electricity shut off | 2.63 | Partially Prepared |
| g. Fire box with hose and axe | 2.87 | Partially Prepared |
| 10. School personnel undertakes evacuation drills once a year | 3.03 | Partially Prepared |
| 11. School has sufficient first aid facilities and is easily accessible to most personnel. | 2.84 | Partially Prepared |
| 12. School holds regular disaster preparedness meetings. | 2.84 | Partially Prepared |
| 13. Mechanisms for coordinating various disaster activities exist in the school. | 2.74 | Partially Prepared |
| **Average Mean** | **2.89** | **Partially Prepared** |

The findings depict that the employees are partially prepared when disaster strikes with an average mean of 2.89. The disaster preparedness indicators which the employees have the lowest scores are the disaster emergency plan reviewed every year (2.79) indicates partially prepared, the employees has an access of the emergency disaster information or manual in every department and mechanisms for coordinating various disaster activities exist in the school with mean score of 2.74, interpreted as partially prepared, smoke detectors available in each room is partially prepared (2.67), automatic light signage of fire exits and routes in case of electricity shut off (2.63) viewed as partially prepared, and equipped with water sprinklers in every room with mean score of 2.54, interpreted as partially aware.

**Relationship between the Profile, the Level of Awareness and the Level of Preparedness of the Employees**

Table 4 presents the relationship of the profile and the level of awareness of the employees.

| **Variables** | **Computed Spearman Rho** | **p-Value** | **Decision on Ho** | **Interpretation** |
|---|---|---|---|---|
| Age and Level of Awareness of the Employees | 0.272 | 0.004 | Reject Ho | There is a significant relationship. |
| Sex and Level of Awareness of the Employees | 6.204 | 0.102 | Failed to reject Ho | There is no significant relationship. |
| Civil Status and Level of Awareness of the Employees | 5.945 | 0.745 | Failed to reject Ho | There is no significant relationship. |
| Highest Educational Attainment and Level of Awareness of the Employees | 22.624 | 0.205 | Failed to reject Ho | There is no significant relationship. |
| Length of Service and Level of Awareness of the Employees | 0.266 | 0.005 | Reject Ho | There is a significant relationship. |
| Number of Related Trainings and Seminars Attended and Level of Awareness of the Employees | 0.307 | 0.001 | Reject Ho | There is a significant relationship. |

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

Table 5 presents the relationship of the profile and the level of preparedness of the employees.

| Variables | Computed Spearman Rho | p-Value | Decision on Ho | Interpretation |
|---|---|---|---|---|
| Age and Level of Preparedness of the Employees | 0.184 | 0.056 | Failed to reject Ho | There is no significant relationship. |
| Sex and Level of Preparedness of the Employees | 6.839 | 0.077 | Failed to reject Ho | There is no significant relationship. |
| Civil Status and Level of Preparedness of the Employees | 7.757 | 0.559 | Failed to reject Ho | There is no significant relationship. |
| Highest Educational Attainment and Level of Preparedness of the Employees | 22.438 | 0.213 | Failed to reject Ho | There is no significant relationship. |
| Length of Service and Level of Preparedness of the Employees | 0.096 | 0.323 | Failed to reject Ho | There is no significant relationship. |
| Number of Related Trainings and Seminars Attended and Level of Preparedness of the Employees | 0.186 | 0.053 | Failed to reject Ho | There is no significant relationship. |

Table 6 presents the relationship between the level of awareness and preparedness of the employees.

| Variables | Computed Spearman Rho | p-Value | Decision on Ho | Interpretation |
|---|---|---|---|---|
| Level of Awareness and Preparedness of the Employees | 0.740 | 0.000 | Reject Ho | There is a significant relationship. |

The findings display that age, length of service and number of related trainings and seminars attended were found to have a significant relationship with the employees' level of disaster awareness. While the level of disaster preparedness was found to have no significant relationship to the employee's profile.

The study's findings reveal a statistically significant relationship between employee disaster awareness and factors such as age, length of service, and participation in related training and seminars, suggesting that accumulated experience and targeted education contribute to heightened awareness levels. Conversely, the absence of a significant relationship between employee profiles and disaster preparedness underscores a critical gap between awareness and actionable readiness. These results imply that organizations must move beyond awareness-building initiatives and implement comprehensive, skills-based training programs. Such programs should focus on equipping all employees with the practical competencies and resources necessary for effective disaster preparedness and response, irrespective of their demographic characteristics.

**Facilitating and Hindering Factors t Disaster Awareness and Preparedness of the Employees**

**Facilitating Factors**

Disaster Awareness: Key factors that enhance disaster awareness among employees include participation in targeted training and seminars, the availability and utilization of a comprehensive disaster manual, engagement in proactive information campaigns, and the presence of clear and visible warning signs and signals.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

Disaster Preparedness: Facilitating factors for disaster preparedness encompass the regular conduct of disaster drills to reinforce practical skills, the provision of readily accessible emergency equipment and necessities, the establishment and communication of a clear evacuation plan, and continuous opportunities for training and seminars to update knowledge and skills.

**Hindering Factors**

Disaster Awareness: Factors that impede disaster awareness include a passive attitude among employees towards disaster risks, inadequate dissemination of critical information, limitations in available resources for awareness initiatives, and an insufficient provision of warning signs and signals to alert employees to potential hazards.

Disaster Preparedness: Hindering factors for disaster preparedness are uncertainty among employees regarding the proper use and location of emergency equipment and facilities, a prevailing passive attitude towards preparedness measures, and the presence of a disaster risk reduction team that is inactive or underperforming.

## DISCUSSION

The results of the study revealed distinct demographic and employment characteristics among the respondents. Most were aged between 21 and 39 years, with a majority identifying as female, single, and holding a college degree. In terms of organizational tenure, 119 respondents reported a length of service ranging from less than one year to five years. Additionally, a large proportion of participants had attended between zero and three trainings or seminars focused on disaster awareness and preparedness. Overall, the findings indicate that employees demonstrated partial levels of both disaster awareness and preparedness.

Statistical analysis established that three variables—age, length of service, and number of disaster-related trainings and seminars attended—had a significant relationship with employees' level of disaster awareness. Conversely, no statistically significant association was found between employees' demographic and employment profile and their level of disaster preparedness.

The study also identified key factors that facilitate disaster awareness and preparedness. For disaster awareness, the primary enabling factors were participation in trainings and seminars, access to disaster response manuals, organizational information campaigns, and the presence of clear warning signs and signals. For disaster preparedness, facilitating factors included regular disaster drills, availability of emergency equipment and essential supplies, established evacuation plans, and participation in relevant trainings and seminars.

In contrast, several barriers were found to impede disaster awareness and preparedness. Hindrances to disaster awareness included passive attitudes among employees, inadequate access to relevant information, limited organizational resources, and insufficient or unclear warning signs and signals. For disaster preparedness, the main obstacles were uncertainty regarding the functionality and availability of emergency equipment and facilities, passive employee attitudes, and inactive disaster risk reduction teams.

## CONCLUSION

In conclusion, this study demonstrates that employees have only partial levels of disaster awareness and preparedness, with the respondent group primarily consisting of young to middle-aged, female, single, college-educated individuals who have relatively short job tenure and limited participation in disaster-related training. While age, length of service, and attendance at relevant trainings and seminars significantly influence disaster awareness, employee profile factors do not correlate significantly with preparedness, suggesting that preparedness is shaped more by contextual or structural factors than individual characteristics. Training, clear guidance materials, and well-organized systems such as drills and evacuation plans are key to enhancing readiness, while passive attitudes, inadequate resources and information, and inactive support systems consistently hinder it. Taken together, these findings underscore the need for organizations to prioritize targeted actions: expanding access to training and information campaigns, ensuring the availability of

emergency resources and clear warning systems, activating functional disaster risk reduction teams, and addressing passive employee attitudes through engagement. Such measures will foster greater resilience in the workplace, and further research can build on these results by exploring additional factors that impact preparedness and evaluating the success of interventions designed to overcome the identified barriers. Based on the findings, S.A.F.E.R. School (Stronger Actions for Emergency Response) Safety Management System was proposed.

## REFERENCES

1. Aghaei, N., Seyedin, H., Sanaeinasab, H., 2018. Strategies for disaster risk reduction education: A systematic review. Journal of Education and Health Promotion, 7, 98. doi: 10.4103/jehp.jehp_31_18
2. Alcayna, T., Bollettino, V., Dy, P., Vinck, P. (2016). Resilience and Disaster Trends in the Philippines: Opportunities for National and Local Capacity Building. PLOS Currents Disasters. Edition 1. doi: 10.1371/currents.dis.4a0bc960866e53bd6357ac135d740846.
3. Ashenafi, H., Adamu, A., Aklilu A., (2018). Assessment of Knowledge, Attitude and Practice of Disaster Preparedness among Tikur Anbessa Specialized Hospital Health Care Workers, Addis Ababa, Ethiopia. American Journal of Nursing Science. Vol. 7, No. 1, pp. 39-48. doi: 10.11648/j.ajns.20180701.1
4. Bhat, B.A., Anees, S., Geelani, S. N. Z., Jan, N.I., Zargar, B.A. (2017). A study on disaster awareness and preparedness among College Students in District Ganderbal of Kashmir Valley. 3 (12), 156-159. Abstract in Researchgate database. (Accession No. 325895339)
5. Blanco D.V. (2015). Disaster governance in the Philippines: Issues, Lessons Learned, and Future Directions in the Post-Yolanda Super Typhoon Aftermath, International Journal of Public Administration, 38, 743-756, doi:10.1080/01900692.2014.979198
6. Commission on Audit. Assessment of Disaster Risk Reduction and Management (DRRM) at the Local Level. (Online) 2014. Retrieved from https://www.coa.gov.ph/disaster_audit/doc/Local.pdf. (Accessed: January 8, 2019).
7. Cuesta J., van Loenhout J., de Lara-Banquesio M.L., Isiderio J.M., Aujoulat I. and Guha-Sapir D. (2018). The Impact of Typhoon Haiyan on Health Staff: A Qualitative Study in Two Hospitals in Eastern Visayas, The Philippines. Front. Public Health 6:208. doi: 10.3389/fpubh.2018.00208
8. Cvetković, V. (2016). Marital status of citizens and floods: Citizen preparedness for response to natural disaster, 89-114, doi: 10.5937/vojdelo1608089C
9. Cyetkovic, V., Roder, G., Ocal, A., Tarolli, P., Dragicevic, S., (2018). The Role of Gender in Preparedness and Response Behaviors towards Flood Risk in Serbia. International Journal of Environmental Research and Public Health. Retrieved from https://www.preventionweb.net/files/62498_62498ijerph15027611.pdf
10. Earthquake (2018). Encyclopaedia Britannica, Inc. Retrieved from https://www.britannica.com/science/earthquake-geology
11. Fire. (2019). In OxfordDictionaries.com. Retrieved from https://en.oxforddictionaries.com/definition/fire
12. Guha-Sapir D., Hoyois Ph., Wallemacq P., Below. R. (2016). Annual disaster statistical review 2016: The numbers and trends. Retrieved from https://cred.be/sites/default/files/adsr_2017.pdf
13. Herzog, R. (2007). A model of natural disaster administration: Naming and framing theory and reality. Administrative Theory & Praxis, 29(4), 586-604. Retrieved from http://www.jstor.org/stable/25610898
14. 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. Retrieved from https://doi.org/10.1016/j.worlddev.2017.02.01
15. Hosseini, S., Heydari, R., Hayati, A., (2013). The Analysis of Factors Affecting People's Preparedness in Dealing with Natural Disasters in 2013 in Rasht-Iran. International Journal of Academic Research in Business and Social Sciences, 3 (10). DOI: 10.6007/IJARBSS/v3-i10/279 Retrieved from http://dx.doi.org/10.6007/IJARBSS/v3-i10/279
16. Luna, E. (2002). Disaster mitigation and preparedness: The case of NGOs in the Philippines. Retrieved from https://doi.org/10.1111/1467-7717.00173

17. Marskole, P. et al. (2018). A study to assess awareness on disaster management among school going children in Gwalior. International Journal of Community Medicine and Public Health, 5(4),1371-1375. Retrieved from https://www.ijcmph.com/index.php/ijcmph/article/viewFile/2757/1893
18. Ministry of Education. Safety Standards Manual for Schools in Kenya. First Edition. Kenya. Nairobi. Government printer. April 2008
19. Mohammad-pajooh, E. and Ab. Aziz, K. (2014). Investigating factors for disaster preparedness among residents of Kuala Lumpur. Natural Hazards and Earth System Sciences, 2, 3683-3709. Retrieved from https://doi.org/10.5194/nhessd-2-3683-2014, 2014.
20. Nyakundi, Z. (2012). Implementation of safety standards and guidelines in public secondary schools in Marani District, Kisii County, Kenya. Retrieved from https://ir-library.ku.ac.ke/bitstream/handle/123456789/5490/Nyakundi%2C%20Zablon%20Ogonyo.pdf?sequence=3
21. Omolo, D., Simatwa, E., (2010). An assessment of the implementation of safety policies in public secondary schools in kisumu east and west districts, Kenya. International Research of Journals, 1(11), 637-649. Retrieved from https://www.interesjournals.org/articles/an-assessment-of-the-implementation-of-safety-policies-in-public-secondary-schools-in-kisumu-east-and-west-districts-ken.pdf
22. Ozmen, F. (2006). The level of preparedness of the schools for disasters from the aspect of the school principals: Disaster Prevention and Management. An International Journal, 15(3), 383-395. https://doi.org/10.1108/09653560610669873
23. Pathirage, C., Seneviratne, K., Amaratunga, D., & Haigh, R. (2015). Knowledge Factors and Associated Challenges for Successful Disaster Knowledge Sharing. In Global Assessment Report on Disaster Risk Reduction 2015.1-30. UNISDR.
24. Philippine Institute of Volcanology and Seismology. (2018). PHILVOLCS. Retrieved February 13, 2019, from https://www.phivolcs.dost.gov.ph/
25. Sakurai, A., Bisri, M.B.F, Oda, T., Oktari, R.S., Murayama, Y., Affan, N. (2018). Exploring minimum essentials for sustainable school disaster preparedness: A case of elementary schools in Banda Aceh City, Indonesia. International Journal of Disaster Risk Reduction, 29, 73-83. https://doi.org/10.1016/j.ijdrr.2017.08.005
26. United Nations. (2008). Disaster Preparedness for Effective Response Guidance and Indicator Package for Implementing Priority Five of the Hyogo Framework Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters. Retrieved from https://www.unisdr.org/files/2909_Disasterpreparednessforeffectiveresponse.pdf
27. United Nations. Sendai Framework for Disaster Risk Reduction 2015 - 2030. Geneva, Switzerland. Retrieved from https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf. February 12, 2019
28. United Nations Development Programme. (2010). Gender and Disasters. Retrieved from https://www.undp.org/content/dam/undp/library/crisis%20prevention/disaster/7Disaster%20Risk%20Reduction%20-%20Gender.pdf
29. Wanjala, G., Onyango, M. A. (2017). Administrative strategies towards disaster awareness and preparedness in secondary schools in Homa Bay County, Kenya. International Journal of Development Research. 7(10), 16420-16423. Retrieved from http://erepository.uonbi.ac.ke/bitstream/handle/11295/43570/Disaster%20Awareness%20And%20Preparedness%20Of%20Secondary%20Schools%20In%20Homa%20Bay%20County,%20Kenya.pdf?sequence=3