An Empirical Study on Awareness of Disaster Management among Students and Staff of Various Colleges / Schools (With Special Reference to Madurai City)

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Abstract
Disaster Management is recently popular in India amid Covid-19 at present. The National Disaster Management Authority (NDMA) has been constituted under the Disaster Management Act 2005, with the Prime Minister of India as its Chairman. The Government urged the importance of disaster management strongly and advised all the Academic Staff Colleges to conduct a Refresher Course on disaster management. In this context, it is a need of the hour to analyze the awareness about natural disasters and its management among the teachers and students of higher education. All the world governments are concerned about natural disasters such as Tsunami, Earthquake, Floods, Volcanic eruptions, and strong winds. In 1989, the United Nations General Assembly declared the decade 1990-2000 as the International Decade for Natural Disaster Reduction to reduce the loss of lives and property and restrict socio-economic damage through concerted international actions, especially in developing countries. With the alarming rise in natural disasters and vulnerability, the world community is strengthening its efforts to cope. A questionnaire was administered among the College and School teachers and students, and their answers were analyzed and computed. This study shows that awareness about disaster management should be improved among the teachers and students of higher education. It also reveals that both the students and staff should be given in-service training in general awareness, activities, and administration related to disaster management.

Keywords: Disaster management, Volcanic eruptions, Socio-Economic damage, National disaster management authority, State disaster management authorities and High Powered Committee

Introduction
The Emergence of an organization is always through an evolutionary process. The creation of the National Disaster Management Authority (NDMA) and State Disaster Management Authorities (SDMAs) by the Government of India is to spearhead and implement a holistic and integrated approach to Disaster Management in India. The policies, plans, and guidelines for Disaster Management were enacted by NDMA, as the apex body, to ensure a timely and effective response to disasters.

Statement of the Problem
Disaster risks in India are further compounded by increasing vulnerabilities related to changing demographics and socio-economic conditions, unplanned urbanization, and development within high-risk zones, environmental degradation, climate change, geological hazards, epidemics, and pandemics. The very basic idea behind this study is that everything begins at home.
This is the crucial concept which induced the researchers to learn on the awareness of disaster and crisis management among the students and staff of various educational institutions in Madurai, Tamil Nadu.

**Objectives**

- To comprehend different disasters, its impact on the life of the people and their management.
- To study the awareness of disaster management among the students and staff of various colleges and schools.
- To highlight the need for efficient crisis management at times of need based on the findings.
- To provide a clear insight on the precautions to be considered commonly by everyone to live a safe and happy life.

**Methodology**

The present study comprises both primary and secondary data collected from the students and staff of various colleges/schools in Madurai City during January 2020.

**Primary Data:** The primary data were collected from various respondents, including students and staff of different colleges/schools situated in Madurai City.

**Secondary Data:** The secondary data were also collected from various standard textbooks, magazines, journals, newspapers, and the internet, which constituted supportive literature to make analysis and suggestions.

**Period of the Study:** The study was undertaken for 2019-2020 (Financial year) during January 2020.

**Sampling Design:** Convenience sampling technique was used. The sample size taken was 100 respondents.

**Statistical Analysis:** Simple techniques such as percentage, bar diagrams, mean, standard deviations, Garret Ranking, and Scaling of the scores regarding the awareness of various preventive measures during crisis, disasters and the level of their expectations for disaster management by both governmental and non-governmental agencies were sought with the help of SPSS 11.0 software packages.

### Table 1: Demographic Profile of the Respondents

| Qualification | Age | Occupation | P |
|---------------|-----|------------|---|
| UG            | 30  | Students   | 70|
| PG            | 20  | Staff      | 30|
| M.Phil / Ph.D | above 46 | Total | 100|
| Higher Secondary | 20  | Total     | 100|
| **Total**     | 100 |            |   |

**Source:** Primary Data; *Percent

Table 1 infers the demographic details of the respondents where 70 percent of the respondents lie between the age group of 16 to 30 years and, 30 percent of the respondents were faculty and, nearly 50 percent of them are pursuing their post-graduation program.

### Percentiles Representing Other Relevant Details about Disaster Management

The study implies that-with concerning the leakage of poisonous gas, 73 percent of the respondents are highly ignorant about the way they need to react when such a catastrophe occurs. About their confidence in facing the future ruin, only 25 percent of the respondents are mentally prepared, and the remaining respondents are perplexed in providing a steady and convincing response. About the heavy smoke, 70 percent of the respondents are completely uninformed about how they have to save themselves. In general, the respondents are aware of most of the disasters to the extent of fifty percent only, but then they are highly naive when it comes to practical behavior.

### Table 2A: Awareness towards Various Types of Disasters: Garret Ranking

| Particulars   | Mean Score | Mean Rank | Rank |
|---------------|------------|-----------|------|
| Earthquake    | 430        | 4.3       | 1    |
| Floods        | 420.2      | 4.202     | 2    |
| Landslide     | 400.2      | 4.002     | 3    |
| Forest fire   | 382        | 3.82      | 4    |
| Drought       | 380.2      | 3.802     | 5    |
| Tsunami       | 378        | 3.78      | 6    |

**Source:** Primary Data
Table 2B: Awareness towards Various Types of Disasters: Garret Ranking

| Particulars           | Mean Score | Mean Rank | Rank |
|-----------------------|------------|-----------|------|
| Wildfire              | 372.4      | 3.724     | 7    |
| Extreme thunder storms| 370.8      | 3.708     | 8    |
| Humanmade             | 366        | 3.66      | 9    |
| Extreme snow storms   | 345.4      | 3.454     | 10   |
| Extreme heat waves    | 337.6      | 3.376     | 11   |
| Extreme cold caves    | 334        | 3.34      | 12   |
| Hail                  | 332        | 3.32      | 13   |
| Inland excess water   | 327        | 3.27      | 14   |
| Epidemics             | 319.6      | 3.196     | 15   |
| Mudflow               | 313.6      | 3.136     | 16   |
| Metrological Occurrences| 290.4 | 2.904 | 17   |

Source: Primary Data

Table 2A & 2B implies that the respondents are mostly aware of the earthquake, floods, landslides, forest fire, drought, tsunami, and all other disasters because they might not have experienced other disasters but could have heard about them through various sources.

Table 3A: Expectations towards Various Schemes and Initiatives about Disaster Management: Garret Ranking

| Particulars                   | Mean Score | Mean Rank | Rank |
|-------------------------------|------------|-----------|------|
| Early Warning System          | 437        | 4.37      | 1    |
| Distribution of educational material | 417.2      | 4.172     | 2    |
| React to crisis               | 413        | 4.13      | 3    |
| Knowing the risks             | 412        | 4.12      | 4    |
| Public awareness campaigns    | 411.4      | 4.114     | 5    |

Source: Primary Data

Table 3A & 3B portrays that, concerning the initiatives expected by the respondents, they are more focused on a system of providing early warning on disasters, they expect a distribution of some educational material on disasters which could be understood by every citizen either literate or illiterate, rich or poor, employed or unemployed because the natural calamities never show discrimination among the people it affects everybody invariably. They need to be educated on how to react immediately for their lives when a crisis occurs. They do have other expectations such as conducting awareness campaigns, including disaster management, even in the school curriculum, and similar other prospects for their well-being in the most vulnerable society.

Hypothesis (H0): There is no significant difference between the Educational qualifications of the respondents and expectations about initiatives by various authorities concerning crisis management.

Hypothesis (H1): There is a significant difference between the Educational qualifications of the respondents and expectations about initiatives by various authorities concerning crisis management.
Table 4: Expectations towards Various Schemes and Initiatives about Disaster Management: One-Way Anova

| Particulars                        | Higher Secondary | Undergraduate | Post Graduate | M.Phil / Ph.D | F | Sig. |
|-----------------------------------|------------------|---------------|--------------|---------------|---|------|
| Mean / Standard Deviation         | M    | SD  | M    | SD   | M    | SD   | M    | SD   | F   | Sig. |
| Governmental initiatives          | 37.95| 4.594| 40.17| 4.691| 39.20| 4.948| 43.00| 4.864| 5.161| .002 |
| Private-sector initiatives and sponsorship | 10.75| 2.314| 11.47| 2.315| 11.75| 2.381| 13.23| 1.612| 6.239| .001 |
| Civic sectors                     | 19.55| 1.276| 21.20| 2.538| 19.50| 3.187| 21.80| 3.056| 4.650| .004 |
| International efforts             | 14.00| 3.387| 16.67| 2.139| 15.45| 2.235| 17.10| 2.524| 6.886| .001 |

Source: Primary Data

It is found from Table 4 that there is a significant difference in their opinion at a one percent level of significance between the educational qualification of the respondents and their expectancy level about the initiatives to be taken by governmental and Non-Governmental authorities. The null hypothesis is rejected in this case. This difference of opinion can be explained by way of mean, and it declares that the expectations of those who are highly educated are more on government initiatives when compared to another category of respondents. This visibly speaks about the relationship between their qualification and their expectations because they may comparably have the more practical knowledge of socio-economic conditions and the role which ought to be played by the government authorities inexorably.

Hypothesis (Ho): There is no significant difference between the different age groups of the respondents about the precautions to be taken concerning disasters.

Hypothesis (H1): There is a significant difference between the different age group of the respondents about the precautions to be taken concerning disasters.

Table 5: Age and Awareness of Precautions to Overcome Disasters: One-Way Anova

| Particulars | 16-30 years | 31-45 years | more than 46 years | F   | Sig. |
|-------------|-------------|-------------|---------------------|-----|------|
| Age         | M  | SD  | M  | SD  | M  | SD  |       |     |      |
|             | 81.79| 9.065| 81.81| 8.256| 90.00| 8.287| 1.656 | .196|

Source: Primary Data

It is found from Table 5 that there is no significant difference in their opinion between their age groups and the precautionary measures to be taken by them to overcome the disasters. The null hypothesis is accepted in this case. Especially nowadays, lots of limelight are on protecting the environment from global warming by various institutions.

Suggestions

As per the outcome of the study, the researcher would like to provide certain suggestions:

1. The respondents are aware but, they need to be made more conscious concerning the art of living as it is being taught in some of the developed nations, which are more prone to disasters.
2. Disaster management needs to be inculcated in children even at very young age, and it would yield better results if added as one of the subjects in their curriculum.
3. It is obligatory to provide the students and staff at all levels to train to handle the victims affected by various disasters. Recently in the Chennai floods, the student community helped in many ways but, only a very small portion of them was into the fields that were worst affected.
4. Corporate instead of offering help at times of crisis would be superior that besides its mandatory requirement, it could provide regular support through its policies either directly or indirectly to the most downtrodden section of the community so that it helps to uplift the standard of their life.
5. Apart from maintaining ordinary bank account savings, the public ought to be given awareness about various investment and insurance schemes which could be availed by them at times of an emergency.

Conclusion

The Government of India is taking various measures to prevent natural and human-made disasters and protect the total ecosystem; it is the individual conscientiousness of every citizen to be vigilant enough concerning disaster prevention, preparedness, relief, and finally, recovery. The multinational corporations need to assist the Government in building a safer and disaster resilient India by developing holistic, pro-active, multi-disaster and technology-driven strategies for disaster risk reduction through the collective efforts of all Government Agencies and Non-Governmental Organisations.

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