

Awareness of Disaster Management among Teachers of Higher Education

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Abstract: Disaster Management is the term which is recently popular in India. 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 urges 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 essential to analyze the awareness about natural disasters and the management of disasters among the teachers of higher education. A questionnaire was administered among the University and College teachers and their answers were analyzed and computed. This study shows that the awareness about disaster management should be improved among the teachers of higher education. It also reveals that both the male and female teachers should be given in-service training in general awareness, activities and administration related to disaster management.

Keywords: National Disaster Management Authority (NDMA), Genaware- General Awareness about Disaster Management, Actaware – Awareness about the activities of Government in Disaster Management, Curaware – Awareness about the Disaster Management curricula, Admaware – Administration regarding Disaster Management, Totaware – Total awareness in Disaster Management.

I. INTRODUCTION

All the world governments are concerning about the 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 with the objective to reduce loss of lives and property and restrict socio-economic damage through concerted international action, especially in developing countries. In India, the Indian Government is taking all the possible efforts to reduce the effects of natural disasters. Though the Government made considerable scientific and material progress the loss of lives and property due to disasters has not yet decreased. Natural disasters affect both developing and developed countries. The developing countries like India are gravely affected in terms of the loss of lives, adversity bared by population and the percentage of their GNP lost. Since 1991, two-third of the victims of natural disasters was from developing countries, while just 2 per cent were from highly developed nations. Those living in developing countries and especially those with limited resources tend to be more adversely affected. With the alarming rise in the natural disasters and vulnerability per se, the world community is strengthening its efforts to cope with it (www.tn.gov.in, 2013).

1.1 DISASTERS WORLDWIDE

Every year people are affected by disasters worldwide. Loss of properties and human life are more in the developing countries and the underdeveloped countries. Figure 1 Shows the number of incidents of natural disasters occurred worldwide from 2000 to 2010.

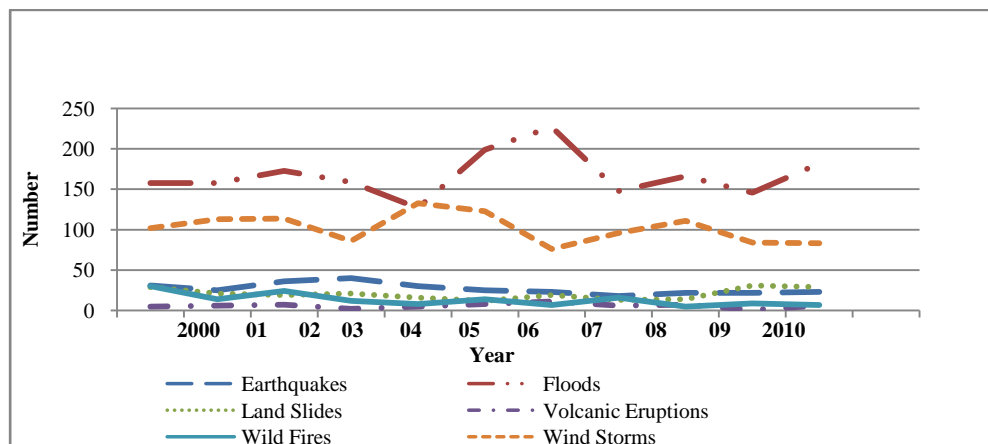


Fig. 1 Disasters Worldwide (2000-2010)

Source: EM-DAT: The OFDA/CRED International Disaster Database; Graph-Dr.R. Vijaya

1.2 DISASTERS IN INDIA

A natural disaster might be caused by earthquakes, flooding, volcanic eruption, landslide, hurricanes etc. Floods are the most common natural disaster in India. The heavy southwest monsoon rains cause the rivers to expand their banks flooding the surrounding areas and kill thousands and displace millions of people. Excess, erratic, or untimely monsoon rainfall may also wash away or otherwise ruin crops. Almost all of India is flood-prone, and extreme precipitation events, such as flash floods and torrential rains, have become increasingly common in central India over the past several decades, coinciding with rising temperatures. Mean annual precipitation totals have remained steady due to the declining frequency of weather systems that generate moderate amounts of rain. In order to be classified as a disaster it will have profound environmental effect and/or human loss and frequently incurs financial loss. In order to be classified as a disaster it will have profound environmental effect and/or human loss and frequently incurs financial loss.

Intertropical Convergence Zone, may affect thousands of Indians living in the coastal regions. Tropical cyclogenesis is particularly common in the northern reaches of the Indian Ocean in and around the Bay of Bengal. Cyclones bring with them heavy rains, storm surges, and winds that often cut affected areas off from relief and supplies. In the North Indian Ocean Basin, the cyclone season runs from April to December, with peak activity between May and November.^[6] Each year, an average of eight storms with sustained wind speeds greater than 63 kilometers per hour (39 mph) form; of these, two strengthen into true tropical cyclones, which have sustained gusts greater than 117 kilometers per hour (73 mph). During summer, the Bay of Bengal is subject to intense heating, giving rise to humid and unstable air masses that produce cyclones. Many powerful cyclones, including the 1737 Calcutta cyclone, the 1970 Bhola cyclone, and the 1991 Bangladesh cyclone, have led to widespread devastation along parts of the eastern coast of India and neighboring Bangladesh. Widespread death and property destruction are reported every year in exposed coastal states such as Andhra Pradesh, Orissa, Tamil Nadu, and West Bengal. India's western coast, bordering the more placid Arabian Sea, experiences cyclones only rarely; these mainly strike Gujarat and, less frequently, Kerala (<http://en.wikipedia.org>, 2013).

1.3 AWARENESS OF DISASTER MANAGEMENT AMONG THE TEACHERS OF HIGHER EDUCATION

Disaster management is emerging as an answer to the major challenge of calamities and the University Grants Commission (UGC) has approved introduction of an optional paper in the subject at under graduate (UG) levels across universities and colleges in the country. The UGC has also decided to introduce it as one of the topics in orientation and refresher courses offered by the Academic Staff Colleges (ASC) for teachers as well. The overall initiative is an effort to spread awareness and step up public preparedness to meet any exigency in times of disaster (www.ugc.ac.in, 2013). Teachers are responsible for disseminating the information of disaster management among the students. Especially, teachers of higher education are expected more to be aware of the details and measures and actions to be taken at the time

of natural disasters. In order to find out that whether the University/College teachers are having disaster management awareness, this study has been carried out.

II. OBJECTIVES OF THE STUDY

The objectives of the present study are:

- To find out the Disaster Management Awareness of the teachers of higher education
- To identify whether any difference in the Disaster Management awareness pattern between the male and female teachers of higher education

III. MATERIALS AND METHODS

Sample: The sample comprised of 143 University/College teachers (77 males and 66 females) from Tamil Nadu and other states, who have participated in the Orientation Programme and Refresher Courses conducted by the UGC-Academic Staff College, Madurai Kamaraj University during 2011-2012. The sample population of teachers did not go for any Disaster Management courses and undertake any training in Disaster Management.

Sampling Technique: Convenience sampling method (Castillo, 2009) (Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher), was used.

Technique used: Likert Rating Scale (http://en.wikipedia.org/wiki/Likert_scale, 2012) was used in this study.

Tool: Disaster Management Awareness Questionnaire (DMAQ) was developed and tested with 50 college teachers. The questionnaire administered among the teachers has 16 questions. The maximum score is 80 and the minimum score for the questions is 16. The DMAQ contains questions related to the General Awareness about Disaster Management (Genaware), Awareness about the activities of Government in Disaster Management (Actaware), Awareness about the Disaster Management curricula (Curaware), Administration regarding Disaster Management (Admaware) and Total awareness in Disaster Management (Totaware). On a five point rating scale, all these four dimensions are given the score 5 as the maximum and 1 as the minimum. To prove the Reliability of the questionnaire, Discriminative Index value (which was above 0.6 for all the questions) was identified using Split – Half method.

Hypotheses formulated for the study are:

1. Hypothesis (H_1): There is significant difference between male and female teachers of higher education in their Academic Achievement (AA) and Disaster Management Awareness (DMA)
2. Hypothesis (H_0): There is no significant difference between male and female teachers of higher education in their Academic Achievement (AA) and Disaster Management Awareness (DMA)

IV. RESULTS AND DISCUSSIONS

The results of the study are given in the following tables.

TABLE I
Academic Achievement Vs Disaster Management Awareness (Total Sample)

Sample Size	Variables	Mean	't' Value	Level of Significance
143	AA (%)	76.99	25.284	0.05*
	Totaware (%)	50.47		

AA (%) -Academic Achievement of teachers in the Orientation Programmes/Refresher Courses

Totaware (%) – Total awareness in Disaster Management

*Significant at 0.05 level

Table 1 infers that there is significant difference between the Academic Achievement and the Disaster Management Awareness scores at 0.05 level of significance. All the teachers invariably got lesser scores in the Disaster Management Awareness test. The Null Hypothesis (H_0) is rejected here.

Table II
Academic Achievement Vs Disaster Management Awareness (Male and Female Teachers)

Gender	Sample Size	Variables	Mean	SD	't' Value	Level of Significance
Male	77	AA (%)	77.09	3.299	16.357	0.05*
		Totaware (%)	50.921053	15.2580149		
Female	66	AA (%)	76.88	3.101	20.478	0.05*
		Totaware (%)	49.962121	12.1488558		

AA (%) -Academic Achievement of teachers in the Orientation Programmes/Refresher Courses

Totaware (%) – Total awareness in Disaster Management

*Significant at 0.05 level

Table 2 infers there is significant difference between the Academic Achievement (AA) and the Disaster Management Awareness (Totaware) scores at 0.05 level of significance. It shows that the male teachers and the female teachers got lesser scores in the Disaster Management Awareness. The Null Hypothesis (H_0) is rejected here.

Table III
Male Teachers Vs Female Teachers (Disaster Management Awareness)

S.No.	Variables	Gender	Mean	S.D.	't' Value	Level of Significance
1.	Genaware	Males	2.23	2.918	1.100	NS*
		Females	1.76	2.590		
2.	Actaware	Males	12.18	4.560	0.932	NS*
		Females	12.86	4.034		
3.	Curaware	Males	16.92	4.047	0.864	NS*
		Females	17.53	3.139		
4.	Admaware	Males	9.33	5.652	1.822	NS*
		Females	7.82	4.537		
5.	Totaware	Males	40.67	12.768	0.352	NS*
		Females	39.97	9.719		

*NS- Not significant

Genaware-General Awareness about Disaster Management

Actaware – Awareness about the activities of Government in Disaster Management

Curaware – Awareness about the Disaster Management curricula

Admaware – Administration regarding Disaster Management

Totaware – Total awareness in Disaster Management

Table 3 shows that there is no significant difference between the scores of the dimensions (Genaware-General Awareness about Disaster Management, Actaware – Awareness about the activities of Government in Disaster Management, Curaware – Awareness about the Disaster Management curricula, Admaware – Administration regarding Disaster Management, Totaware – Total awareness in Disaster Management) of Disaster Management Awareness of the male and female teachers. The Null Hypothesis (H_0) is accepted here.

The results show that there is no significant difference between the male and female teachers in the Disaster Management awareness and the knowledge about disasters and Disaster management has to be enhanced. Figure 3 shows the average scores obtained by the teachers, which show that the teachers have to improve and update their knowledge in Disaster Management general awareness, activities, administration and in total Disaster Management awareness.

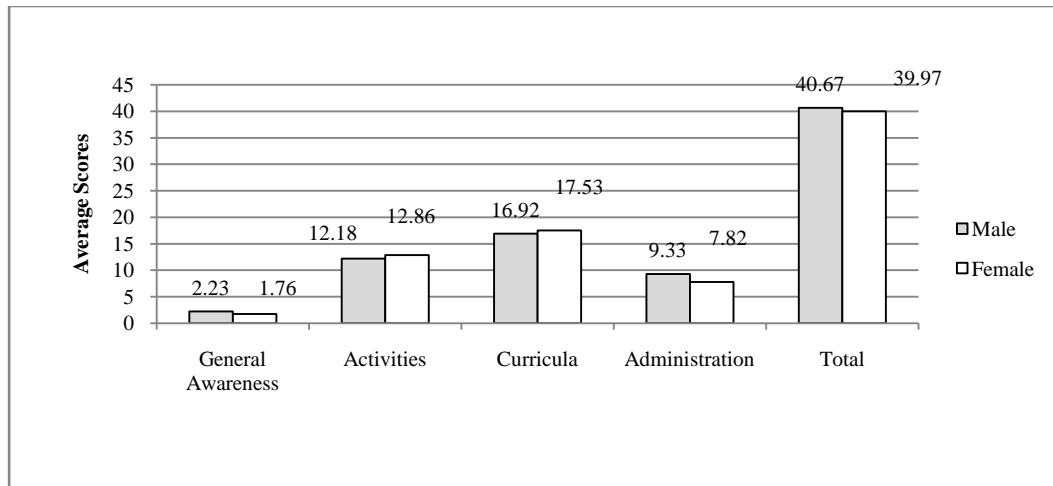


Fig. 2 Disaster Management Awareness among Teachers of Higher Education
(Score: Maximum - 80; Minimum -16)

V. CONCLUSION

This study shows that Disaster Management Awareness is the most wanted and essential knowledge which should be improved among the teachers of higher education. Curricular and extracurricular activities of Disaster Management which are to be included in the school and college curricula should be given more attention. Readiness to help the affected people at the time of disasters, humanity towards affected people, planning, preparedness, precautions, rescue methods – both the male and female teachers should be given in-service training in all these categories. Concepts of Disasters and Disaster Management aspects should be included in the Curricula of Post Graduate and Master of Philosophy degrees.

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